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Minnesota Medicine

Journal of the Minnesota State Medical Association, Southern Minnesota Medical Association, Northern Minnesota Medical Association, Minnesota Academy of Medicine and Minneapolis Surgical Society

Volume 29 **July, 1946** **No. 7**

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Minnesota Medicine

Journal of the Minnesota State Medical Association, Southern Minnesota Medical Association, Northern Minnesota Medical Association, Minnesota Academy of Medicine and Minneapolis Surgical Society

Volume 29 July, 1946 No. 7

THE SOCIOLOGICAL PATHOLOGY OF MEDICINE

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Swanville, Minnesota

IT is a far cry from the horse and buggy days of medicine to the exact diagnoses and specific treatment of today. The phenomenal progress of scientific medicine can well stir the hearts of the profession with pride, and the minds of the American people with gratitude. Yet, through the transition from the old to the new, changes have occurred upon which the profession might well meditate. It might even be well to consider what good in the old order has been lost, and what undesirable features exist in the new.

Even though it may be heresy to impugn medicine by admitting it has faults, most of its imperfections are of a social rather than a scientific nature. Harried with the intensity of practice, physicians have been too pre-occupied with its scientific aspects to realize the influence of sociological developments. And so, insidiously yet steadily, the sociological nature of medical practice has changed. The objective of this discussion is to prescribe some of the changes and trends in medical practice and to suggest improvements for some of medicine's sociological defects.

Etiology

At the turn of the present century, diphtheria occurred in vast pandemics. Typhoid and scarlet fever had widespread prevalence. Smallpox still decimated the population in recurrent epidemics. For these and other infectious diseases, the family doctor spent hours supervising what symptomatic treatment seemed advisable. As the years passed, diphtheria immunization was added to smallpox vaccination. In time, too, through the ceaseless efforts of immunologists has come prevention of typhoid and scarlet fever and other infectious diseases. Vaccination and immunization campaigns have reduced many of the infectious diseases to relatively infrequent occurrence. Preventive medicine, though scarcely known a half century ago, has changed the physician's experience with infectious diseases to one of prevention rather than that of "watchful waiting" and symptomatic treatment.

Accurate diagnosis of many diseases closely approaches an exact science today, whereas it often depended solely upon nicety of judgment and clinical acumen in the not distant past. When the general practitioner was called to see a jaundiced patient some years ago, gall-bladder disease and catarrhal jaundice concerned him most. The final determination of the diagnosis resulted from repeated observations and the clinical course. Now, catarrhal jaundice has become infectious hepatitis and a long list of both surgical and medical diseases of the liver requires consideration. For their accurate diagnosis, a multitude of the most intricate laboratory tests[5] must be done. In fact, at times only needle puncture of the liver for microscopic examination of tissue will produce the correct diagnosis. So, at present, proper diagnosis of many diseases, as exemplified by those of the liver, is no longer within the realm of the general practitioner's facilities.

Correct treatment of different diseases also portrays a change from the old order. Classic references depict the doctor of the early part of this century almost constantly at the bedside of

Presidential address presented at the annual meeting of the Minnesota State Medical Association, Saint Paul, Minnesota, May 21, 1946.

the pneumonia patient. Even the textbooks of that period advocate tepid sponge baths, hot applications to the chest and stimulants through the crisis. Now, with the typing of the different strains of pneumococci has come serum for each strain. Even more recently, the sulfonamides and penicillin have been added as effective anti-pneumonia agents. So now, proper treatment means accurate typing of the germs in the sputum, blood studies, and laboratory tests to guide the usage of the different remedial agents. Now, each patient must be in a hospital where such tests can be done and the proper curative agents given as required. The attainments of science in correct treatment of various diseases have revised the old symptomatic treatment in the home.

Among the most remarkable advances are those in surgery and anesthesia. It is not beyond the memory of many that "typhlitis" or inflammation of the bowel found one of the family pouring chloroform while the family doctor removed the appendix with the patient lying on the kitchen table. From that to the miraculous attainments of surgeons and anesthetists today is an intriguing story. With cyclopropane and other new anesthetic agents, patients are safely kept under anesthesia for eight to ten hours. Today, the whole stomach, part of the liver, the pancreas, or an entire lung can be removed with impunity. But these feats have been accomplished only by integration of the knowledge and ability of a corps of the best trained specialists. Again, here, medicine has passed from the sphere of a single man, the general practitioner.

In the present discussion, these changes are noteworthy principally from a sociological perspective. As the science of medicine has developed, accurate diagnosis and proper treatment have changed the role of the general practitioner and have placed upon him an increased responsibility in diverse medical fields. For a majority of the people, he still remains the first and often the only solution to their medical problems. Yet as medicine has passed one milestone after another of scientific progress, he has required some supplementation of his services.

Through this same period has come a decided growth of specialization. Re-organization of the Johns Hopkins Medical School faculty[4] in 1889-90 began to focus attention on postgraduate medical training. A second impetus toward specialization came with the Flexner report[1] of 1910. As a result of it, more than of any other single factor, the diploma mills and an easy, rapid medical education fell into disrepute. Internships, residencies and fellowships became an integral part of medical education. Added momentum toward limitation of practice and specialization also came from the first World War. Different specialties in medicine had, even then, developed to the point where medical book publishers[10] revised their policies to cater to the ever-increasing army of specialists. So marked has grown this trend that at present, specialization involves one of every three physicians.

With the growth of specialization there has come a migration of doctors from rural areas and a concentration of them in the cities. This is an inevitable result, for the practice of a specialty is dependent upon large reservoirs of potential patients. As the ranks of the specialists have increased, the number of rural and general practitioners has decreased. In this regard, a recent study[6] has shown that not only has there been a reduction in the number of rural physicians during recent years, but also rural physicians are much older than those in urban locations.

Still another factor, the hospital, has had its influence. Originally, the hospital was only for the critically ill, for the surgical case, or for obstetrical care of the wealthy. The days are not long passed, especially in rural areas, when home deliveries were the rule, and when tonsillectomies or other minor operations were done routinely in the doctor's office. Not long passed, also, are the days when the general practitioner's office was the center of diagnostic studies.

Now, the hospital[2] is the focal point of medical activities. In many of even the more remote rural areas, physicians will attend confinement cases only if they are in hospitals. It is exceptional to find a physician who removes tonsils or performs minor surgical procedures in the office. Diagnostic studies are now conducted in the hospital where x-ray and laboratory facilities, a trained technician, or even a pathologist, are constantly available. And in treatment, hospitalization has replaced home treatment in rural areas as well as in the cities.

As these changes have occurred, hospitals have employed highly trained anesthetists and have elaborate equipment for inhalation and other anesthetic agents. A corps of technicians and a completely equipped laboratory for chemical, bacterial

and pathologic studies are prime requisites in hospitals today. Often a radiologist is a resident staff member. Interns, residents and fellows provide various services in addition to those of the attending physicians. And even beyond this, hospitals in some areas are admitting to their staffs only diplomates of the different specialty boards.

Thus, the sphere of the hospital has grown tremendously. Its activities have replaced and expanded those of the doctor's office. Its personnel has changed with the times to include specialists of all types. It has become the focal point of all medical activities.

Pathology

Having now reviewed some of the forces responsible for the sociological maladjustments in American medicine today, the logical next step is the actual description or definition of the disease process. This is vital for several reasons. Already, several governmental agencies, sociologists and others have discovered medicine's defects and have taken definite measures to change them. More important, though, is the realization that if medicine is to put its own house in order, its imperfections should be recognized and clearly defined.

Dominant among pathologic features is the maldistribution of physicians. The medical profession can be likened to an army composed of too many officers and too few infantrymen. Only relatively are there too many specialists, yet the scarcity of general practitioners is both real and absolute. With the increase in specialization and migration of physicians to urban areas, one sector, the rural districts, is inadequately manned by shock troops whereas the other salient, the larger cities, has a massive concentartion of officer personnel.

Before the war, there were 750 persons per physician in this country. This ratio through the war became 1:1500. In 1944, more than eighty counties had no active physician and 583 counties had more than 3,000 people per active physician.[7] These ratios are considered critical and definitely portray a maldistribution of physicians. Availability of the services of both general practitioners and specialists to people in the remote districts, as well as to those in the cities, is necessary. On such availability depends uniform as well as good medical care. Not only too few of each type of physician, family doctor and specialist, but faulty distribution of each, are the component parts of this imperfection.

Closely linked with this is the inadequacy and maldistribution of hospitals. The inadequacy of hospital beds in the larger cities is well recognized, but the lack of hospital facilities in rural sections of the country, is even more critical. In 1200 counties, 40 per cent of the total, with 15 million people, there is either no hospital or none that meets minimal hospital standards. Principally, the shortage involves beds for the acutely ill. Yet, were there more domiciliary quarters for the aged, and were there more institutions for the chronically ill and convalescent, the acute and emergency cases could easily be provided hospital care. It is noteworthy, too, that the shortage of all these types of hospital beds exists in both rural and urban districts. Thus, too, one of the inseparable components of medical care, hospital facilities, is grievously inadequate.

Moreover, the hospital situation, as it exists today, sounds the tocsin which should alert the profession to another facet of the pathology. This is the loss of control by physicians of some of the hospital features of medical practice.[2] No longer is the hospital dependent upon the practice and good will of its staff members. No longer must patients be courted and solicited. It is now a question of which patient will be admitted and which one rejected. And who answers these questions—not the physicians or the staff, but the business manager or the hospital administrator. Similarly, staff membership, which once required election by the medical staff, is now often being determined by non-medical hospital authorities. Carrying this even further, the actual care provided a patient while in the hospital, at times, is not determined by the attending physician. Some hospital regulations require that the surgeon must be a diplomate of a surgical board, the internist a medical diplomate, the obstetrician an obstetrical board diplomate. Should the surgeon's patient develop an acute otitis media and glomerulonephritis, an otologist must be called for the discharging ear and an internist for the Bright's disease. This gradual surrendering of medical control of hospital activities should be recognized as the inherent evil and ultimate danger which it is.

Another intangible, yet real, danger or disease of medical practice now is the weakening patient-physician relationship. With the greater number of patients each physician must attend and with the development of laboratory technology, history-taking and physical examination are being replaced by laboratory work. In days past, there was no alternative for a careful history, and its only diagnostic supplement was a complete physical examination. Before more specific therapy was possible or before surgery reached its present pinnacle, the slow, anxiety-laden recovery of the patient created associations between patient, relatives and the physician which were lasting ties. Thus was born an intimate relationship between patient and physician which was second to none except possibly that of parishioners and the clergy. Today, with radiological and laboratory advances, as well as the physician's press of time, the patient-physician relationship is much less personal. The machine-age, conveyor-belt, mass-production methods of medical practice today have disrupted the classical diagnostic importance of history, physical examination and laboratory tests. Also, it has failed to knit the patient-physician relationship of former years and has created a breach between the profession and the public.

Last, but not least of pathologic features, is the much debated economic one—the increased cost of medical care. At the beginning of the century, practically the entire cost of medical care was the physician's bill for personal services. The cost of drugs was a minor item, and rarely hospitalization and nursing care were significant amounts. As long ago as 1929-32, the Committee on the Costs of Medical Care[8] found the physician's services amounted to but 40 per cent of the whole bill. With the increase of hospitalization, the development of laboratory refinements in diagnosis and the advances in therapy, the physician's fee is but a minor item in the cost of medical care. Progress in scientific medicine has imposed a heavy financial burden upon the patient.

Thus, in the evolution of science, the high cost of good medical care has become one of the prime faults of medicine today. It prevents uniform distribution of adequate services to all people. In this way, it is an obstacle to maintenance of the highest medical standards. For these reasons, its correction is an obligation of the medical profession.

Therapy

Having diagnosed the disease, what is the remedy to be applied; or, at least, what are the therapeutic recommendations.

Before embarking upon such a discussion, it is essential to establish the broad principles necessary for therapeutic guidance. It is the quality of American medicine which is its saving grace. Anything which reduces its excellence, threatens the whole product. Any remedial agent which even potentially slows the progress of scientific advancement is detrimental to the whole organism. Always bearing this in mind, one is free to elaborate upon specific curative suggestions.

So far as the problem involves the scarcity and maldistribution of general practitioners, superficially the solution appears to be simply more general practitioners widely distributed. Such, however, is not the case. Here, a page can well be taken from Russian medical history.[8] Within the past quarter of a century, 18,000 physicians once served 170 million Russians. Now it is claimed 200,000 physicians provide medical care for even less than the original 170 million. Woven into this record, though, is a story of improvement in medical education, a graduation of specialized services, a wide distribution of all different types of medical care, and also a program of compulsory postgraduate education. All of these features should be included in any plan for increasing the number of American general practitioners.

Since greater numbers of general practitioners are necessary, some medical schools could arrange their curricula solely for the education of such physicians; or, most medical schools could educate a greater number of general practitioners than at present. Already it has been proposed that courses be so arranged that graduates be more fully grounded in all the specialties. Following the same pattern which obtains in the specialties, by meeting certain qualifications or passing certain examinations, such a physician should be able to be a diplomate of a general practitioner's board. This in itself would elevate the status of such physicians and would ensure a continuing high standard of medical care. His position and role in the world of medicine and in the public's opinion must be elevated to the extent that general practice in rural areas is as desirable as specialization in a large city.

From too few general practitioners to too many

specialists again seems to be a problem simple of solution. But, again, this is not true. Only relatively are there too many specialists. Actually, a greater number of specialists of all types is needed. Still, there can be no denying that specialists of all kinds should be more widely disseminated to make them as accessible to the rural population as to city dwellers. The role of specialists in the present sociological maladjustment of medicine requires their continued contributions to research and scientific advancement. Their activities in these fields could be a good medium for continued education of the general practitioners who refer their cases, provided diagnosis, pathology and treatment receive greater emphasis in their correspondence with the referring physician. Then, too, part of the overcrowding of hospitals in the larger cities could be solved by early return of the patient to the referring physician after which the specialist could, if necessary, collaborate as a consultant by correspondence in the subsequent care of the patient.

Hospitals, too, can be integrated into proper treatment of the pathology at hand. The first requirement is more hospitals in both cities and rural areas. Part of this same formula is additional hospitals for the chronically ill and homes for the aged and convalescents. Already, in some areas, the gradation of hospitals has been effectively employed to bring all types of medical care to all people. In such schemes, there is first the rural medical center, and then district, regional, and finally, the state hospital. Services provided range from obstetrical and minor surgical care in the rural medical center to the latest developments in both diagnosis and treatment in the state hospital. Through gradation such as this, every detail of medical care is available, as needed, to the entire population.

Beyond these, the specifics of hospital therapy, comes the broader, less easily visualized role of the hospital. As your erudite president of 1945, Dr. E. L. Tuohy, so astutely suggested, the growing sphere of the hospital makes it the perfect nucleus for postgraduate medical education. Clinical-pathological conferences, consultant rounds, bedside clinics and other similar activities conducted by the attendant or consultant staff would make every hospital, both large and small, a virtual continuation-study center. Such a program would ensure control of medical phases of hospitals by the medical profession. It would constantly improve the quality of medical care. And it would be a focal point for the strongest organization of the medical profession.

Somewhat related to the hospital remedy just cited is the recapturing of the public's fancy and the former close physician-patient relationship. This goal is as important as any of the other recommendations. Its accomplishment depends upon concerted efforts of every physician to personalize both diagnosis and treatment. The utter disregard which various political factions have for the medical profession indicates the lack of either respect or admiration which the public has for physicians in general. Such a state of affairs did not exist when American medicine was dominated by the family doctor.[9] Medical service then was so personal a matter between patient and physician that political regimentation of the profession was unconsidered. Through tedious and painstaking restoration of a close patient-physician relationship, the "grass roots" influence of medicine can again be felt. Other gains to medicine from such efforts are even more important. By this, it is meant that reversion to previous emphasis of a detailed clinical history, stressing of adequate physical examination and resort to laboratory methods only as necessary, will ultimately reflect themselves in greater clinical acumen and a higher quality of medical practice.

And so, the last agent in the therapeutic armamentarium, the economic change, requires consideration. Even while considering definite measures to reduce the cost of medical care, medicine's best foot should be put forward through publicizing two facts. In the first place, widespread recognition should be given the fact that very little of the increase in cost is for the physician's services. And secondly, the increase is due to a vastly improved product, in fact, the best medical care to be found anywhere in the world.

For the wealthy, no economic remedy is necessary. For the vast body of the middle class, uniform distribution of costs by voluntary prepaid medical care programs holds forth the greatest promise. European and American experiences with compulsory and voluntary programs, respectively, show that the voluntary type is most economical and provides better service. For the

indigent and marginally indigent, the Minnesota program appears best. In it, the medical, dental and other allied professions voluntarily reduce the cost of service or supplies to a level which the taxpayers can afford.

Prognosis

So, it is seen that a sociological cancer is invading the vital organs of American medicine. Its immediate cure is as imperative as the maintenance of high medical standards. Unless the medical profession itself eradicates the disease, political forces will direct its treatment. In every other country where this has occurred, not only has the quality of medicine suffered, but the cost of it has been far greater than that of the better product it replaced.

It is vitally important that the remedial measures for medicine's sociological pathology be initiated by the profession without delay. Such measures include a marked increase in the production of general practitioners, some increase of specialists, and an appreciable increase in hospital facilities for the acutely ill and for chronic, aged and convalescent patients. Also, quality as well as quantity, are important considerations. Beyond these factors, maldistribution of all medical services and facilities should be so recognized and treated that the best medical care is available to all people everywhere. These requirements can only be met by reducing the cost of medical care to the point at which it is within the financial reach of all people, or, in the case of indigents, of the governmental unit which is responsible for their medical care.

Initiation and provision of these curative measures is a primary obligation of the medical profession. Every physician has been so occupied with his professional problems that little consideration has been given these matters. This "let George do it" principle of the vast majority of physicians has been responsible medically for the same disastrous "too little and too late" experience of some Allied armies in the recent war. Unless every physician and every medical society devotes more time to the proper, broad solution of socio-economic problems of medicine, the majority of the entire profession's time will be spent filling out governmental reports under a new national compulsory health insurance program. In other words, unless organized medicine puts its own house in order, political forces will apply the remedies.

References

1. Binger, C.: The Doctor's Job. Chp. 1, p. 22. New York: W. W. Norton & Co., Inc., 1945.
2. Cahal, Mac F.: Private practice endangered by hospital encroachment. M. Econ., 20:38-40, (Aug.) 1943.
3. Committee on Costs of Medical Care: Composition of the family medical bill. Summary Volume of Reports. Chp. 34 and 35. Chicago: University of Chicago Press, 1932.
4. Cushing, H.: The Life of Sir William Osler. 1:311. New York: Oxford Press, 1926.
5. Hoffbauer, F. W., Evans, G. T., Watson, C. J.: Cirrhosis of the liver: correlation of composite liver function studies with liver biopsy. M. Clin. North America, 29:363-388, (Mar.) 1945.
6. Mountin, J. W., Pennell, E. H., Brockett, G. S.: Location and movement of physicians, 1923-38. Pub. Health Rep. (Feb. 16) 1945.
7. Procurement and Assignment Service: Counties without doctors. M. Econ., 22:56, (Feb.) 1945.
8. Scott, Melvin: This is Soviet medicine. M. Econ., 21:60, (Feb.) 1944.
9. Stevenson, R. L.: Underwoods. Dedication, pp. v-vii. New York: Chas. Scribner & Sons, 1887.
10. Year Book Publishers: The story of the practical medicine year books. Preface, p. v., Year Book of General Medicine, 1940. Chicago; Year Book Publishers, 1940.

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BRUCELLOSIS—CLINICAL ASPECTS

WENDELL H. HALL, M.D.

Department of Medicine, University of Minnesota
Minneapolis, Minnesota

BRUCELLOSIS is not a common disease in humans in Minnesota. However, it is apparently on the increase. For this reason it is well that physicians in this area become acquainted with the clinical aspects of the disease. Although the disease has been recognized and studied for sixty years, it remains a diagnostic and therapeutic problem.

It was established more than sixty years ago by David Bruce that this disease is caused by a small, non-motile, gram-negative bacillus *(Brucella melitensis)*. Three varieties of this bacillus have been described and given names in accord with their principal hosts: melintensis (goat), abortus (cow), and suis (pig). Each variety has been shown to be capable of infecting man. The organism gains entrance to the human host by means of the skin or gastro-intestinal tract. The incubation period is difficult to determine but apparently varies from one week to three months.

In the ten-year period ending in 1944, 1,851 cases of human brucellosis were reported to the Minnesota State Board of Health. Inspection of their figures reveals that the disease is more than three times as frequent in males as in females. An increase in the number of cases per year is also evident. Fortunately, the mortality rate is low, being about 1 per cent in this group and roughly 3 per cent in most of the larger series reported elsewhere.

The disease is uncommon in infants and children despite the fact that this age group is exposed to large quantities of contaminated raw milk. The disease is most common among the middle-aged. Study of the distribution of the disease by occupation reveals that the majority of infections occur in farmers, housewives, domestics and packing plant employes. This seems most likely due to the frequent exposure of these groups to infected animals, raw meat and raw milk. Raw milk appears to be the most frequent source of infection in Minnesota but the handling of abortion material and raw meat constitutes important sources also.

Read at the annual meeting of the Minnesota State Medical Association, Saint Paul, Minnesota, May 20, 1946.

The onset of the disease may be insidious or sudden. Acute brucellosis may be ushered in by a chill and high fever. More often, however, the illness begins with general malaise, headache, pain in the back or legs, sweats, and a low grade fever. The most common symptom is *weakness*. During the past eight years, Dr. Wesley W. Spink and I have observed forty patients in whom we felt a definite diagnosis of brucellosis could be made. In every instance, weakness was a prominent symptom. The term "undulant fever" when applied to this disease is misleading. When fever appears it is usually not undulant and in some instances fever may be entirely absent even in the presence of a bacteremia.

The physical examination may reveal very little in spite of the patient's multiple complaints; this results in much difficulty separating the disease from psychoneurosis. In about one-third of the cases one may be able to detect an enlarged spleen and in approximately 10 per cent peripheral lymphadenopathy occurs. In a few instances one may find evidence of localization of the organism upon a heart valve, in the gall bladder or in bone. There are many reports in the literature concerning complications involving the eyes, skin, central nervous system and peripheral nerves.

Since there are no symptoms or signs which are specific in this disease, the clinician must depend upon the laboratory for confirmation of his diagnosis in the individual case. Here again considerable confusion exists.

A mild anemia may be present but is not characteristic of the disease. The leukocyte count is often normal or slightly below normal, and a predominance of lymphocytes is a frequent finding. In contrast to most infectious diseases, in brucellosis the erythrocyte sedimentation rate is normal or only mildly increased. The presence of Brucella agglutinins in the blood serum is one of the most reliable findings. Difficulties arise in interpretation when the titre of agglutinins is low. It has been stated that a titre of 1:80 is diagnostic; however, it is known that early in the course of the disease agglutinins may be absent

and a high titre may never develop. Furthermore, agglutinins may persist in low titre for a year or more after clinical recovery from active brucellosis.

The complement-fixation test does not appear to have any material advantage over the agglutination test. The opsonocytophagic test advocated by Huddleson and others as a test of the immune status of the patient does not appear to be sufficiently reliable for routine clinical usage.

The only finding which can be said to be definitely diagnostic is the repeated isolation of viable Brucella from the blood, other body fluids or tissues. Since Brucella are notably difficult to culture, in the majority of cases one is unable to obtain such evidence. In forty instances of brucellosis at the University of Minnesota Hospitals positive cultures were obtained in only one-third. Nevertheless, at least three blood cultures should be drawn in each suspected case. Special containers will be mailed to the physician for this purpose by the Laboratories of the Minnesota State Board of Health upon request.

Since skin allergy to Brucella develops early in the course of the disease the skin test is a useful method in clarifying the issue where the diagnosis is in doubt. Although purified Brucella protein antigens such as Brucellergen are probably most satisfactory for such purposes one may safely use 0.1 c.c. commercial heat-killed Brucella vaccine intradermally after diluting it 1-100 with sterile physiological saline. The reaction is usually delayed; thus the test should be read in twenty-four and forty-eight hours. The skin test has the same significance as does the Mantoux test in tuberculosis. Thus a positive skin test may be expected in nearly every case of active brucellosis. However, a positive skin test is no more reliable than the finding of a low titre of serum agglutinins in deciding whether a given patient has active brucellosis. Skin allergy persists for years after clinical recovery from the disease. Except during the first few weeks, a negative skin test may be said to rule out brucellosis; an exception to this statement must be made in those rare instances where Brucella have localized on a heart valve. In two patients with Brucella endocarditis observed at the University of Minnesota Hospitals skin allergy to Brucella antigen was absent.

As mentioned previously the prognosis as regards mortality is good. Since a majority of human Brucella infections are probably subclinical one might safely say that the mortality rate is well below 3 per cent; death, when it occurs, is usually due to some complicating disease. In the average case clinical symptoms last about three months. However, persistence of ill-defined symptoms over a period of several months or years is a distressingly frequent problem. In one instance we were able to isolate viable Brucella from a pericholecystic abscess ten years after the onset of the disease. It is in such chronic cases that the diagnosis is particularly difficult to establish.

The presence of a positive skin test *per se* is not valid evidence of active brucellosis. Five hundred fifty-three consecutive adult patients were tested recently in the Out-Patient Department of the University of Minnesota Hospitals by Dr. George N. Aagaard. One hundred four patients (19.5 per cent) were found to have a positive intradermal test, with purified Brucella protein used as the antigen. Of those with a positive skin test twenty-three also had Brucella agglutinins in their serum. However, in only eight patients was there clinical evidence of active brucellosis and in only one patient was a positive blood culture obtained.

No treatment has been developed which is specific and thoroughly reliable. In our experience best results in acute brucellosis are obtained by confining the patient to bed and giving 1 gram of sulfadiazine every four hours by mouth for two to three weeks. In most instances fever disappears and blood cultures become sterile within one week. However, if therapy is interrupted at the end of one week relapses are frequent. Even with a prolonged course of sulfadiazine therapy occasional patients may have a relapse and require a further course of therapy. Since the disease is usually of short duration when non-specific therapy, such as bed rest, is used alone, the value of sulfonamide therapy is difficult to assess. Recently we have been able to show that sulfadiazine and sulfathiazole protect infected chick embryos and allow them to hatch whereas untreated chick embryos nearly always die four or five days after innoculation with Brucella.

In chronic cases with localized suppurative lesions surgical drainage is indicated. In such cases fever therapy (Kettering hypertherm cabinet) may also be beneficial.

Although various types of vaccines and cul-

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PROGRESS IN THE CONTROL OF BRUCELLOSIS (BANG'S DISEASE) IN DOMESTIC ANIMALS

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BRUCELLOSIS or Bang's disease is a widespread, chronic, infectious disease of cattle, swine, and goats which primarily, but not in frequently affects man and other animals. Brucellosis is the major disease hazard now confronting the livestock industry. The genus Brucella includes three species. These are: *Brucella abortus,* the cause of Bang's disease in cattle, *Brucella suis,* the cause of the disease in swine, and *Brucella melitensis,* the cause of the disease in goats. In ordinary growth, character, and shape of the three germs, there are no special features that can be utilized to distinguish the one member from the other of this closely related family.

None of the organisms is confined to a single host. Therefore, one cannot differentiate the various members on the basis of host relationship. The swine strain may be found in cattle and all three may be found in man.

Brucella abortus is the causative agent of approximately 85 per cent of the cases of infectious abortion in cattle. This germ was first described by Bang in 1897. It was not recognized in the United States until 1910. *Brucella abortus* is not very resistant to disinfectants or direct sunlight. It does not withstand dryness, and it is destroyed rather quickly in the presence of putrefaction. When protected from the above conditions, it may retain its vitality for several months.

Brucella suis was discovered in 1914. For a number of years, it was thought that this germ was identical with *Brucella abortus.* Continued study showed that the germs are indistinguishable from the standpoint of morphology, but they do differ in their growth requirements, and they also differ in the disease produced in inoculated guinea pigs.

Brucella melitensis is responsible for the disease in goats. The infection in goats was first found on the Island of Malta, later in various southern European countries. This type is rare in the United States, but outbreaks in goat herds occurred in one or two of our southwestern states in 1911 and again in 1922. Of the three species of the organisms, *Brucella melitensis* is the most virulent, the swine type is next and the cattle type, *Brucella abortus,* is least virulent for man.

Read at the annual meeting of the Minnesota State Medical Association, Saint Paul, Minnesota, May 20, 1946.

Parts of Body Most Often Affected

Brucella abortus affects both the male and the female, particularly the female. The disease is most prevalent and most severe in young females, especially when carrying their first calf. The organism has a predilection for embryonic tissue. The placenta becomes inflamed, the fetal circulation is destroyed, and as a result the fetus is asphyxiated and then expelled or aborted. This occurs most often when the animal is in the fifth to the seventh month of the gestation period. The act of abortion is the chief symptom or characteristic of the disease. All diseased animals, however, do not abort. Therefore, one must not measure the importance or the prevalence of the disease from the standpoint of the act of abortion only. In the male the organism takes up residence in the testes and accessory reproductive organs.

Manner of Spread of Infection

The infection in cattle occurs most often through the ingestion of feed contaminated with the discharges of the genital organs of aborting animals. Cattle may be infected experimentally by instilling a few drops of a virulent culture into the eye. This may be an important channel of infection. The skin may also be a possible mode of infection. Infection may result from the mating of infected individuals. Thus the diseased bull may infect the healthy female; or the sound bull, having recently served an infected female, may later carry the infection to a healthy female. Very early in the study of brucellosis, it was thought that the chief mode of infection was by way of the genital tract or breeding organs. Later it was shown that the digestive tract was by far the most important avenue of infection. In the case of swine the infection is disseminated mainly through the act of copulation.

Diagnosis or Recognition of the Disease

Although there are numerous symptoms of brucellosis in cattle, they cannot be depended upon in arriving at a positive diagnosis. *The agglutination blood serum test constitutes a highly accurate and dependable method of diagnosis.* There are two methods of making the agglutination test: the test tube or slow method, and the plate or rapid method. The complement-fixation test was used extensively when the disease was first studied, but this test, while accurate and just as dependable, lacked the simplicity of the agglutination blood serum test, and therefore, was soon discarded. Attempts to perfect a skin test such as used in tuberculosis have been made from time to time and, while a number of tests have been developed, none has proved as reliable as the *agglutination test.*

Many investigators believe the *Brucella abortus* is responsible for approximately 85 per cent of all infectious abortions in cattle. *Trichomoniasis,* a venereal disease affecting both male and female cattle, is a fairly common cause of abortion and therefore, must be considered in the establishment of a positive diagnosis. Other bacteria capable of causing abortions in cattle are encountered from time to time, but they are of comparatively little importance.

Protection Through Increased Age and as a Result of Having Had the Disease

Calves infected before birth or shortly thereafter remain infected only for a short period unless they are permitted to nurse infected cows or consume infected milk for a long period of time. Within a short time after they are weaned, they become free of the infection and will, if reared in brucellosis or Bang's-free territory, develop into uninfected healthy mature animals. Animals thus developed, however, are susceptible after they have reached the age of puberty and especially as soon as they have become pregnant. Heifers in their first pregnancy are readily infected. It is in such individuals that the disease reaches its greatest height of destruction. Mature cows that have been reared in disease-free surroundings are easily infected and are likely to suffer an abortion when infected. An animal that has aborted once or that has been infected, though not having aborted, is not as readily infected a second time. A measure of resistance develops as a result of having overcome the infection. The immunity is not, however, very great and many animals will abort a second and frequently a third time. As a rule, most animals after one or two abortions will thereafter complete pregnancy in a normal manner even though many may remain infected. It has been estimated that 30 to 40 per cent of infected cows harbor the organism in their udder and eliminate it with the milk. Such cows constitute an important public health hazard.

Treatment with Drugs

There are no medicinal agents of any nature that are of value in the prevention or cure of brucellosis. Medicinal substances that have from time to time gained popularity in the treatment of the disease have proved to be worthless when subjected to carefully-controlled experiments.

Artificial Protection

The early employment of killed vaccines was extensively tried as a means of establishing artificial immunity. While such vaccines did not produce any harm to the animal thus vaccinated, the protection produced was far from solid or lasting. This form of vaccine was finally discarded.

Vaccines consisting of virulent organisms administered to young females at or about the time of puberty was next in line. Though vaccination with live virulent germs produced a more solid protection than the vaccine made up of killed organisms, unfortunately it also caused, in a high percentage of animals, udder infection which of course, was a very serious objection. Fortunately this form of vaccination was abandoned before it came into general use. The next step toward subduing the disease by vaccination consisted in the utilization of a vaccine made up of an organism of moderate virulence. The organism, known as strain 19, used in this vaccine is characterized by having high protective values and moderate disease-producing abilities, especially when used in calves. Calfhood vaccination, recommended in 1940 by the Bureau of Animal Industry, U. S. Department of Agriculture, is now recognized as an important step forward in the over-all control program of brucellosis. Vaccination must be regarded as an adjunct and not a substitute for all other methods of control. It is intended to play a supplementary role and is not to be used as a substitute method.

Control Measures

In numerous states, a Federal-State Co-operative program of control is in progress. This plan is based on the immediate removal of all infected animals as determined by the agglutination blood serum test. The county area plan of testing in Minnesota has resulted in the control of the disease in twenty-two counties. Six additional counties are engaged in the process of becoming modified brucellosis-free territory and several more counties are deeply interested in developing the county area eradication program. Other plans of control consist of the following:

1. Test and slaughter of reactors in the absence of area testing.

This method of control in a comparatively short period of time has reduced the incidence of the infection by about 50 per cent.

2. Test and slaughter and calfhood vaccination.

3. Test with retention of reactors under quarantine and calfhood vaccination.

The Vaccination of Adult Cattle

The proposal to employ strain 19 vaccine in mature animals was a natural development following the adoption of the calfhood vaccination as a part of the official control program for brucellosis in cattle. Unfortunately there is relatively little critical information in the results of the vaccination of adult cattle. There are reasons to believe that adult animals that return to a negative status following vaccination have a more solid immunity than do calves. We must not forget, however, that adult cattle when vaccinated retain a positive titer for a long time. Since legal restrictions prohibit the movement of reactor animals, the owner must be prepared to face such hazard if he elects to employ adult vaccination. Unfortunately there are no methods by which we can distinguish between a vaccination reaction and a reaction caused by natural infection. Strain 19 while non-pathogenic for calves may be pathogenic for pregnant animals particularly when such animals are in advanced pregnancy.

Public Health Aspects of the Vaccination of Mature Cattle

The consumption of raw milk from reactor cows, regardless of vaccination, constitutes a source of danger to man. Therefore, when adult vaccination is contemplated the owner of the animals should be fully advised in order that the milk from such individuals will not be used without first being pasteurized. We are not aware of any cases of brucellosis in man caused by the drinking of milk containing strain 19 organisms but there are cases on record where man has developed brucellosis through accidental exposure to strain 19. The Minnesota State Livestock Sanitary Board permits the use of strain 19 vaccine in mature cattle only in unusual circumstances and only as a herd problem.

The indiscriminate employment of the vaccination of mature cattle whether they be beef or dairy animals will seriously delay if not entirely disrupt the final control of brucellosis.

BRUCELLOSIS—CLINICAL ASPECTS

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ture filtrates have been widely used and acclaimed, the mechanism of this response remains to be studied; it may well be non-specific. Their use is not advised in the routine treatment of patients with acute brucellosis. Further intensive study of their effect in chronic brucellosis should be encouraged.

Recent reports indicate that streptomycin is effective against Brucella *in vitro* and in laboratory animals. However, the few published reports regarding its use in human brucellosis have not been so encouraging. Apparently, it is effective in acute brucellosis but relapses are frequent. Streptomycin and sulfonamides are not effective in chronic brucellosis unless bacteremia or localized infection is present, in which case at least temporary benefit may result from their use.

THE TREATMENT OF MEDICAL JAUNDICE

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THE most important clinical sign of liver disease is jaundice. This is described as visible coloration of the skin, mucus membranes and sclera due to deposits of bile pigments. This is measured by the icteric index which is the expression of the sum total of the retention and accumulation of bilirubin in the blood stream.[8] The serum contains 0.1 to 0.25 mg. bilirubin per 100 c.c. of blood normally. Bilirubin does not usually appear in the urine until the concentration in the blood is 2 or more mg. per 100 c.c.

Jaundice may be classified into three major types. The first is hemolytic jaundice, usually hereditary, but which may be acquired. It is due to blood dyscrasias, recognized from history and manifested by increased erythrocyte fragility. The second type is variously called medical, hepatic, toxic, infectious, hepato-cellular or hepatosis jaundice. This variety, with which this paper deals, is the result of degeneration or dysfunction of liver cell and is caused by:

1. Alimentary intoxication, such as food poisonings, alcohol.
2. Therapeutic agents, as arsenicals, cinchophen, bismuth, vaccines, dinitrophenol, sulphonamides, tannic acid, trinitrotolulene, blood plasma, whole blood, chloroform, carbon tetrachloride.
3. Infections, as syphilis, Weil's disease, sepsis.
4. Endogenous toxins, as intestinal, metabolic, thyrotoxicosis.
5. Exogenous toxins, as mushrooms, phosphorus.
6. Anoxemia, as heart failure.

The third type of jaundice is the obstructive group which includes calculi, tumors, and inflammations of the biliary tract. Two relatively rare forms of hyperbilirubinemia are incipient spleen-liver disease, designated as early Banti's disease or splenic anemia and secondly idiopathic persistent hyperbilirubinemia.[10] Rich separates jaundice into retention and regurgitation types. The former corresponds to the hemolytic variety, is caused by an overproduction of bilirubin, manifests a subnormal liver function, has an indirect van den Bergh and urobilirubinuria. The regurgitation type corresponds to the toxic and obstructive types, is caused by rupture of the bile canaliculi, either by obstruction of the bile ducts or necrosis of liver cells. This is manifested by a direct van den Bergh and bilirubinuria. Other classifications divide jaundice into an extra-hepatic and intra-hepatic.[16] Fantus and Steigmann[6] classify hepatic jaundice into mild and severe. In the latter group are those cases of cirrhosis of the liver which show jaundice as a terminal event. For the purposes of this paper, all diseases of the liver showing degeneration or dysfunction are called medical and those obstructive lesions of the liver or biliary tract are called surgical. As a point of differentiation, it has been noted that enlargement of the spleen is frequent in medical jaundice and generally absent in obstructive jaundice.[16] In cases of portal cirrhosis, statistics from five major clinics indicated that jaundice was a clinical sign in 30 to 65 per cent of all cases.[7]

Clinically, jaundice is accompanied by anemia, epigastric pain, nausea, vomiting and anorexia. Other common findings include hypotension, bradycardia, pruritus, headaches, tenderness over the liver region and splenomegaly. The latter may be hidden by ascites in portal cirrhosis. Depending upon the etiology, the acute symptoms last from several weeks to a few months. If the jaundice deepens progressively or oliguria occurs, it indicates obstructive jaundice and necessary exploration. In acute yellow trophy, the liver is shrunken, jaundice is deep and vomiting, ecchymoses, apathy, delirium and coma follow.[16]

The laboratory aids in differential diagnosis of medical and obstructive jaundice. It is also a valuable aid in prognosis and determining progress of the treatment.[11] In medical jaundice, there is: (1) a biphasic or direct van den Bergh; (2) tendency toward decreased blood urea nitrogen, which is low in severe cases; (3) tendency toward increased blood amino-acids; (4) normal to low blood cholesterol; (5) modified dextrose tolerance; (6) altered albumin-globulin ratio-lowered serum albumin and elevated serum globulin. In surgical jaundice, there is (1) an immediate direct van den Bergh; (2) no urobilinogen in the

stools; (3) an excess of fats in stools; (4) increased plasma phosphates; and (5) high blood cholesterol.

This paper limits itself only to the discussion of medical jaundice as defined above. A physiological approach to the problem of treatment was directed after etiological factors were determined. The severity of the ailment depends upon the etiological factors involved and on the extent of liver damage. The determination of the albumin-globulin ratio is the simplest procedure in ascertaining the progress of the treatment instituted.

Biopsies and peritoneoscopy offer valuable data in diagnosis and prognosis of liver disease. Indeed, from a pathological viewpoint, by means of biopsies, it was found that lesions of the liver are similar in epidemic or infectious hepatitis, in hepatitis due to arsenotherapy and in jaundice following injection of human serum or plasma.[4] It is recommended that therapy should be continued on those medical cases even after the icterus is gone, for Weir[16] states that when jaundice is absent, decreased or has disappeared in the face of definite liver damage, the treatment should be maintained until liver function tests are normal. The principles of the therapy are elimination and removal of the etiological factors, protection of the damaged liver cell so that it may resume the power of regeneration, and restoration of normal liver functions which have been lost or temporarily destroyed. Therapy includes:

1. Elimination of etiology
2. Bed rest.
3. Dietary measures
4. Medications
5. Symptomatic care

Treatment

1. *Determination of the etiological factors* can be made by careful history, physical findings and laboratory procedures.

2. *Bed rest* tends to conserve energy, facilitates ease of carrying out diagnostic procedures, puts the patient under complete control where he can be more closely watched. Arbitrarily, a minimum of two weeks in bed is required.

3. *Dietary Management.*—Since the original studies on treatment of jaundice, the concepts of proper diets have been altered. It has been found that inadequate diets, deficient especially in Vitamin B, may lead eventually to disease of the liver.[7] The diet is the most important single therapeutic measure. It is universally agreed that the diet should be well balanced, contain sufficient Vitamin B and be adequate for body needs. In cases of liver damage, a diet high in carbohydrate, moderately high in protein, and low in fat has been found universally acceptable for proper liver reparation.

Carbohydrates.—Metabolism is fairly well understood. Liver stores carbohydrates in the form of glycogen. The liver converts glucose, levulose and galactose to glycogen and glycogen to glucose. It also forms glucose from certain amino-acids. It has been found that in diseases of the liver, there are decreased blood sugar values. Bollman and Mann[14] showed that a liver with a high storage of glycogen favors regeneration of liver parenchyma. All authors agree on a high carbohydrate intake. The intake of glucose makes for a minimum burden on the liver. It protects the liver cell, restores normal glycogen content of the liver, is easily digested, combats toxicity and tends to decrease the icteric index. Portis[14] states that when the liver cell is damaged, a higher concentration of sugar in the blood is necessary because the so-called liver threshold has been raised, since the liver cells cannot pick out glucose to manufacture glycogen as promptly as they normally would. In acute hepatic insufficiency, often resulting in the so-called liver death, there is a marked hypoglycemia.[2]. Glucose tolerance tests show interference with glycogen-storage functions of the liver. Some observers noted that carbohydrates protected the liver from injury, if during the deposition of glycogen in the liver, fat was displaced.[15] It is recommended that 74 per cent of the diet should contain carbohydrates.[15] Average cases are given 400 or more grams of carbohydrate daily. Fruit juices fortified with dextrose supplements meals. In addition, sweet tea, custards and puddings may be administered. When indicated, for acute cases of gastro-intestinal upsets, intravenous glucose is given. Some observers prefer parenterally administered glucose to oral ones, for it has been found that larger amounts of dextrose can be deposited in the liver if equal amounts of carbohydrates were administered intravenously rather than orally.[15] Unfortunately large amounts of carbohydrates cannot be given by this route. Fantus[6] has recommended

10 per cent lactate solutions, 100 c.c. daily. The use of 50 c.c. 50 per cent glucose may be the preferred method since it is highly concentrated and its hypertonicity tends to further dehydration. The use of 5 to 10 units of insulin twice daily has also been advocated in the belief that the insulin will further utilization of the glucose, prevent hyperglycemia and glycosuria. It is likely that insulin metabolizes the glucose rapidly and will favor glycogen deposits in the liver. Some experimenters have shown that in cases of obstruction near the ampulla of Vater, the accessibility of pancreatic juices to the duodenum is interrupted with the conclusion that either starchy foods are to be avoided or insulin should be administered. It is important to remember that an overly sufficient caloric intake and adequate nitrogen balance is essential to restoration of the physiological functions of the liver. A minimum of 3,000 calories in three meals with three interval feedings is recommended.

Protein.—The role of the liver in metabolism and utilization of proteins is an important one. It forms glucose from certain amino acids. It manufactures plasma proteins, especially fibrinogen and albumin. This function of the liver is readily recognizable by laboratory procedures for in early cases of medical jaundice there is retention of protein levels, and no change in albumin-globulin ratio, but as the severity of the disease increases and chronicity or cirrhosis occurs, the ratio is reversed and protein levels are lowered. It is necessary therefore to retain the function of the liver to manufacture plasma proteins. It has been found that damaged livers are high in lipid content. It has also been demonstrated that the percentage of liver fat was inversely proportional to the liver protein.[7] Similarly, fatty infiltration of the liver may be a precursor of cirrhosis. Experimental production of cirrhosis of the liver by dietary means, using a diet rich in fats, has been proven.[7] An increase, moreover, in the amount of protein or carbohydrate in the diet usually decreases the amount of fat in the liver. It appears that it is necessary to decrease the amount of fat in case of damaged livers, and increase the amount of protein as well as the carbohydrate. Ravdin and his associates[15] have illustrated that protein was a more active lipotropic agent than carbohydrate and that the protein intake must be adequate before glycogen from an increased carbohydrate dietary regime can protect the damaged liver. Fagin and his group[5] have shown that a high protein diet is imperative in treating hepatitis and that the lipotropic activity of amino acid mixtures apparently is due to methionine. The administration of amino acid mixtures in portal cirrhosis caused a decreased percentage of hepatic fat and concommitant increases in liver protein.

In the normal diet, the standard recommendations have been one gram of protein per kilogram of body weight for optimum nutrition for the adult. In young, growing children and for cases where there are reduced plasma protein levels, such as the advanced cases of liver disease where jaundice is manifested, the recommendation has been for one half to twice as much protein intake.[12] The diet recommended by Fleming and Snell included 110 grams of protein.[7] Ravdin, et al.[15] have recommended a diet of 74 per cent carbohydrates with 20 per cent protein and not over 6 per cent fat. A dietary regime which has been complemented by addition of amino acids will bring total protein intake up to 140 grams daily.

The source of the protein has been carefully considered. Nitrogen equilibrium and good health have been maintained when only one tenth of the total protein intake is of animal origin. Protein from vegetables such as cereal grains, wheat, corn, rye, peas and beans are very satisfactory. Other sources, such as dairy products like milk, cheese and eggs, are also capable of supplying the essential amino acids.[12] Animal proteins are not advisable in large quantities and should be administered only as a variety food. Animal proteins are avoided because they contain considerable amounts of undesired fat. Many observers have noted that animal proteins have an excess of cystine which has been shown to induce acute hepatic necrosis.[7] It is also demonstrable that cirrhosis which has been produced by diets low in protein with added cystine, are prevented by feeding choline, methionine and casein, the latter being obtained from dairy proteins. Fagin, et al.[5] report good results in treating cirrhosis of the liver with a high carbohydrate, high protein, low fat diet. They recommend vitamin supplements, choline, methionine or amino acid mixtures.

Medications

Ottenberg[13] has shown that in acute hepatitis or catarrhal jaundice, stimulation of bile secretion eliminates the possibility of back pressure in the

larger ducts and thereby assists the liver in secreting bile. Bile salts are of definite advantage, although the use of oxidized unconjugated bile acids which cause a greatly increased volume flow may actually depress normal constituents of bile.[16] The unoxidized conjugated bile salts which increase volume flow and natural biliary constituents tend to relieve intra-hepatic capillary pressure, increase drainage from the liver and relax the sphincter of Vater. Salicylates or Carlsbad salts may also be of value in this respect.

Vitamins play an important part in re-establishment of normal liver physiology. The liver is capable of manufacturing Vitamin A from carotene. It stores Vitamin B complex, Vitamin A and D and the anti-pernicious anemia factor. Greene[7] points out that yeast tends to prevent cirrhosis of the liver. Annis and Comfort[1] indicate that Vitamin B-1 and the complex are essential to normal liver metabolism. Vitamin K decreases the bleeding tendency in some cases of jaundice. Butt[2] noticed a deficiency of prothrombin of the blood due to failure of absorption of certain sterols which is responsible for the hemorrhagic diathesis in jaundice. Administration of Vitamin K in conjunction with bile salts is indicated wherever prothrombin time is altered.

Proteins in various forms may be used to supplement the diet. Amino acids may be given by mouth and intravenously. The amino acid mixtures are prepared by hydrolyzing casein and contain amino acids in the same proportion as they are found in casein. The methionine content of casein is 3 per cent. It is possible that methionine may supply methyl groups for the formation of choline or an active compound derived from choline which is of proven value in preventing further liver necrosis or cirrhosis.[5] However, the use of intravenous hydrolysate of protein is not practical unless given in large quantities. Plasma albumin, where a single protein is desirable, may be given intravenously. It has the disadvantage of being available in limited amounts, at the present time. Whole blood and gelatins given intravenously are of questionable value. Oral administrations of hydrolysates of casein and skimmed milk with its low fat content offer the best supplements to a high protein dietary regime. Casein is an active lipotropic agent which provides protection from hepato-toxic agents. Recently, the intravenous readministration of sterile, siphonated ascitic fluid which is very similar chemically to serum, has been advocated.[7] If it is concentrated, or given in large doses, severe reactions occur. In amounts of 500 to 1000 c.c. daily, reactions are very unlikely. However, the ascitic fluid should contain more than 1 per cent protein to warrant its re-injection.

Liver extracts are recommended for their replacement value where liver degeneration has occurred. There appears to be a correlation between liver extract and Vitamin B complex.[1] It also combats the anemia seen in jaundice. Approximately 60 c.c. daily, or 2 c.c. intramuscularly three times a week are given. If ascites occurs with the jaundice, Fantus[6] prefers to use the parenteral method.

Symptomatic Care

The value of diuretics is questionable. In the chronic or resolution stages of hepatic disease, the diuretic tends to further dehydrate the liver and wash out the bilirubin from tissues. The diuresis is a prognostic sign. If marked spontaneous diuresis occurs, the prognosis is very favorable. If the urinary output remains unchanged, chances of recovery are considered poor. In early stages of cirrhosis, ascites may be controlled by use of ammonium chloride or the mercurial diuretics, intravenously or by suppository. The efficiency of mercurial diuretics varies with the difference between the protein concentration of the blood plasma and that of the ascitic fiuid. The more advanced the cirrhosis, the greater will be the reduction in the serum proteins and, therefore, the less effective the response to mercurial diuretics.[13] Diuretics should be used cautiously since febrile reactions, hematuria and inadequate response are contra-indications to its continued use.

Portis recommends potassium iodide as an alterative.[14] It is of some value in luetic hepatitis which is characterized by early fever and more pronounced pain. In these cases, mercury inunctions are of benefit since arsenic and bismuth are contraindicated.

Cathartics are employed to relieve the biliary stasis, increase peristalsis, eliminate alimentary intoxications. It may be of value in infective hepatitis in which experimenters have claimed to have found a causal virus in the feces of infected patients. The preference of cathartics has been toward magnesium sulfate, citrate of magnesia, and calomel.

Digitalis may be given as indicated to build up the cardiac reserve and decrease congestion. Paracentesis, delayed as long as possible to prevent peritoneal irritation, must be accomplished for ascites. If bradycardia or hypotension is severe, whole blood, serum albumin or plasma may be given. Duodenal drainage may be accomplished but its chief rôle is diagnostic rather than therapeutic for it exhausts the patient, interferes with nutrition and is not recommended routinely. For anoxemia of cardiac decompensation, transfusions of small quantities of whole blood may be given. Esophageal varices may be treated by tamponades or injections in the hands of a skillful operator. Hemorrhages are treated symptomatically. Anemia is combatted by the use of iron and/or liver, depending upon the laboratory findings. Puritus is another prognostic sign for as jaundice deepens, the itching becomes more intense. If pruritus occurs before jaundice, it indicates an obstructive type. Intense itching may be relieved by colloidal starch or oatmeal baths, cold enemas, aspirin with belladonna or intravenous minute quantities of novocaine.

Summary

1. Jaundice as a manifestation of hepatic disease has been discussed briefly.

2. Several classifications of jaundice, its various types, its synonyms, its clinical manifestations, and laboratory recognition and its etiology have been reviewed.

3. The physiological considerations in the treatment of jaundice are indicated.

4. Treatment is primarily a dietary one using a high carbohydrate (74 per cent), high vegetable and dairy protein (20 per cent) and low fat (6 per cent) diet.

5. Medications which include bile salts, amino acids, vitamins and liver extracts are important adjunct therapy.

6. Symptomatic care is given as indicated.

References

1. Annis, J. W. and Comfort, M. W.: Portal cirrhosis with good immediate results from medical treatment. Proc. Staff Mayo Clin., 13:45, (July 13) 1938.
2. Butt, H. R.: Common emergencies arising in the course of hepatic disease. M. Clin. North America, 22:967, (July) 1938.
3. Butt, H. R.: The rôle of Vitamin K in pevention of hemorrhage arising from diseases of the biliary tract. S. Clin. North America, 19:891, 1939.
4. Editorial: Aspiration studies on the liver in acute hepatitis. J.A.M.A., 123:1050, (Dec. 18) 1943.
5. Fagin, I. D., Sahyun, M., Pagel, R. W.: Cirrhosis of the liver: The lipotropic action of parenterally administered amino acids. J. Lab. & Clin. Med., 28:987, (May) 1943.
6. Fantus, B. and Steigmann, F.: Therapy of icterus. J.A.M.A., 110:732, (March 5) 1938.
7. Greene, C. H.: Physiologic considerations in the treatment of portal cirrhosis. J.A.M.A., 121:715, (March 6) 1943.
8. Heyd, C. G.: The liver and gall-bladder disease. Army M. Bull., 39:2, (April) 1937.
9. Ivy, A. C.: An outline of liver functions and jaundice. J. Michigan M. Soc., 37:121, 1938.
10. Johnson, T. A., and Bockus, H. L.: Significance of mild hyperbilirubinemia in gastro-intestinal patients. J.A.M.A., 121:728, (March 6) 1943.
11. Levinson, S. A.: Laboratory examination in gall bladder and associated liver damage. M. Clin. North America, 23:17, (Jan.) 1939.
12. Lewis, H. B.: Handbook of Nutrition. Chicago America Medical Association, 1943.
13. Ottenberg, R.: Painless jaundice. J.A.M.A., 104-1681, (May 11) 1935.
14. Portis, S. A.: Treatment of jaundice. M. Clin. North America, 23:83, (Jan.) 1939.
15. Ravdin, I. S., Thorogood, E., Riegel, C., Peters, R., Rhoads, J. E.: The prevention of liver damage and the facilitation of repair in the liver by diet. J.A.M.A., 121:322, (Jan. 30) 1943.
16. Weir, J. F.: Hepatitis, some forms not commonly recognized. J.A.M.A., 15:1356, (Oct. 8) 1938.

THE ECONOMIC COST OF PARESIS IN THE UNITED STATES

The direct cost to the taxpayer of maintaining paretics is over 11 million dollars annually and the money loss of income is approximately 112 million dollars for male paretics.

The cost of maintenance of paretics in 1940 is estimated as approximately 7.5 million dollars for an average resident population of 20,963 in State hospitals and 3.8 million dollars for an average patient population of 5,143 in Veterans Administration Facilities. The figure of $11,391,545 is an underestimation of the cost to the taxpayer of the United States of maintaining paretics but it is a definite, calculable cost.

The estimated annual loss of working years of life in the United States caused by paresis is 75,729 man-years and 23,645 woman-years. Divided into occupational groups, the figures for men represent 10,655 professional and kindred workers; 11,793 salespersons; 3,768 clerical workers; 7,194 service workmen; 23,273 skilled workers or craftsmen; 6,138 semi-skilled or production workers; 10,908 unskilled or physical laborers.

The median age of outset of paresis is 42 for men and 41 for women. The median age on admission for paretics to State institutions is 44 for men and 42 for women. Paresis usually strikes persons around 40 years of age, the age at which men in some occupations have reached their maximum earning capacity.—ALBERT P. ISKRANT, *Journal of Venereal Disease Information*, Washington, 26:175-183, (August) 1945.

HYPERSENSITIVITY TO PENICILLIN SIMULATING SERUM SICKNESS

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WITH the advent of parenteral penicillin therapy, untoward reactions to penicillin (commercial), as reported by various investigators, have been extremely variable.

Numerous authors[2,3,4] have suggested an analogy to serum sickness, not because of the similarity of symptoms, but because of the delay in the onset of symptoms, which usually occur after cessation of penicillin therapy.

The two following cases are reported because of their marked similarity to serum sickness and the scarcity of such reports[1] in the literature.

Report of Cases

Case 1.—D. N. D., a white soldier, aged twenty-seven, was admitted to the hospital on October 30, 1945, with the complaint of chills, fever and a left sided chest pain, especially marked on deep breathing, of twenty-four hours' duration.

At the time of admission, the patient presented the additional past history of hospitalization early in October, 1945, with the same complaint of chills, fever and left sided chest pain. At that time a diagnosis of pneumonia was made, for which the patient received penicilin for five days. The patient's subsequent course was uneventful and he was released three weeks later, five days prior to his admission here. Otherwise the patient's history was essentially negative. His personal and familial allergic history was also negative.

Physical examination on admission revealed an acutely ill individual. The temperature was 103.2 F., pulse 112, respirations 26. Examination of the chest revealed distant breath sounds, with a few crepitant rales, in the left axilla. The remainder of the chest was essentially negative. The laboratory studies revealed a sedimentation rate of 17 mm., white blood cells 12,500, hemoglobin 95 per cent, polymorphonuclears 84 per cent, lymphocytes 13 per cent, 1 monocyte and 2 eosinophiles. The urine was normal; Kahn was negative.

The clinical impression at the time of admission was that of an atypical pneumonia and the patient was treated expectantly. During the evening of November 2, 1945, because of a sharp rise in temperature to 101 F., penicillin therapy was instituted. The patient received 20,000 units of penicillin every three hours for five doses, at which time penicillin was discontinued early on November 3, 1945.

The patient's subsequent course was uneventful until November 11, 1945, when he suddenly developed a generalized urticaria. Later in the same day he developed a generalized adenopathy and a polyarthritis involving both knees, elbows and the small joints of both hands and feet. There was definite redness and swelling of the above-mentioned joints. The patient's temperature, which had been entirely normal since November 3, 1945, suddenly rose to 101 F. by 4:30 P.M. and remained elevated until 2:00 P.M. on November 13, 1945. The patient's symptoms remained marked for three days, but by November 14, 1945, the urticaria and polyarthritis began to subside. On November 16, six days after onset, the patient was again asymptomatic.

Because of an unavoidable sudden transfer to another Army hospital, the patient could not be studied immunologically. Thus, skin testing was not done until December 6, 1945, three weeks after the acute illness, when patient was again available for study. At that time both direct and passive transfer skin tests with penicillin (commercial) were negative.

Case 2.—S.L.W., a white female infant, aged twenty-two months, received 20,000 units of penicillin every three hours, totaling 100,000 units, for an acute otitis media on January 6, 1946. No penicillin was given the next day, but on January 8, 1946, because of a sudden marked rise of temperature, she was given one injection of penicillin in beeswax which contained 100,000 units.

The patient's personal allergic history was entirely negative. However, the father has had recurrent migraine, easily precipitated by pork and chocolate, for twelve years. Patient's only previous contact with penicillin was in March, 1945, for acute otitis media.

Following the penicillin therapy the infant was entirely asymptomatic until January 16, 1946, when she suddenly developed a generalized urticaria with an elevated temperature of 100 F. She was irritable and listless. The patient's father, who is a physician, noted her movements were guarded. A careful examination by him revealed generalized joint tenderness, especially of both knees. Other than apparent swelling of the thumb of the right hand, no swelling or redness of the joints was noted. The following day her temperature was 102 F. and her urticaria and polyarthralgia persisted. In addition, bilateral cervical, axillary and inguinal lymphadenopathy became evident. The lymph nodes were moderate in size, tender and discreet.

On January 20, 1946 the patient was completely free of her urticaria for the first time since its onset. In addition she was afebrile and free of her polyarthralgia. However, her generalized lymphadenopathy still persisted. At this time an intradermal test, containing 20 units (.01 c.c. solution containing 2,000 units per c.c.) of penicillin (commercial) was definitely positive. A control test utilizing the diluent was negative. Twenty minutes after the positive skin test became evident, a generalized urticaria was noted, which persisted for approxi-

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ETHYLENE DISULPHONATE IN ALLERGY

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IN 1940, Evans, Badman, and Maisin[3] suggested that allergy is the result of a disturbance in carbohydrate metabolism which is due to lack of a normal carrier catalyst. To remedy this lack of an oxidation catalyst, they used ethylene disulphonate (Allergosil) in the extremely high dilution of 1.10^{-15}. They reported on its use in the treatment of allergy in man and particularly in the treatment of asthma. They reported very excellent results and stated that this substance would afford a "degree of protection" to animals against anaphylactic shock. Several reports have appeared since. Norman M. Smith[6] reported 413 cases with 76.47 per cent complete relief. Clifford L. Bartlett[1] reports 247 cases of allergy in children with satisfactory results in 86.64 per cent. Wasson[7] treated a small group of allergic patients and states that "many seem to have benefited from administration of ethylene disulphonate."

W. Ray Shannon[4] states, "I have given substantial trial to ethylene disulphonate and with very satisfactory results. Complete failures have been few, complete successes also, but the great majority of patients have been benefited to a striking degree. Clinical results are too striking to be disregarded.

In the November 14, 1942, issue, the *Journal of the American Medical Association*[2], in an editorial, criticized the publicity of Allergosil. It went on to state that the promoter of this product, Edward H. Spicer, has also previously used "Edwenil" and now marketed ethylene disulphonate through the Spicer Gerhart Company of Sunland, California, at $13.50 per 2 c.c. dose. Dr. Austin Smith, Secretary of the American Medical Association Council on Pharmacy and Chemistry[5] writes:

"The number of inquiries regarding ethylene disulphonate has been so great that this office has very recently sent a letter to fifteen doctors who are known to have done investigational work with Allergosil (ethylene disulphonate). To date we have had time to receive only a few replies, but so far all the replies unequivocally state that there was observed no greater benefit following the use of Allergosil than that which would follow the use of a placebo such as distilled water and isotonic solution of sodium chloride.

"The criticism of the Allergosil publicity (November 14, 1942)[2] has received additional support in the form of a report by Fisk, Small and Foord of the Research Department of Collis, P., and Howard Huntington Memorial Hospital, Pasadena California. These investigators found that under the conditions of their experiment, ethylene disulphonate 'did not produce a significant degree of shock.' Thirty-three of their sensitized animals treated with Allergosil showed a mortality rate of 60.51 per cent; thirty-one animals treated with distilled water showed a mortality rate of 67.74; and twenty-five untreated animals showed a mortality rate of 72 per cent."

Ethylene disulphonate was used in the allergy clinic of the University of Minnesota in the manner recommended in the papers reporting on its benefits. All patients treated were well controlled, having been observed under usual conditions for several months to years. All had had complete allergy workup including skin tests, as well as complete physical examination including all necessary laboratory procedures in the Out-Patient Department of Internal Medicine. Alcohol, opium derivatives, barbiturates, sulfa drugs, aspirin and anesthetics were excluded as per instructions given. The standard dose was 2 c.c. Because the solution is highly unstable and rapidly oxidizes in presence of air and oil and certain chemicals, the clean sterile glass syringe and needle provided were always used. No disinfectant was used on the skin. The contents of the ampule were rapidly drawn into the syringe and the needle placed in position. The injection was given deep in the deltoid muscle. The injection is followed by fibrillation of the muscle but is not particularly painful.

Ethylene disulphonate was used in eighteen authentic cases of the allergic state including twelve of asthma, and six of allergic rhinitis. All these patients had three injections of the drug at intervals of one week. Under these conditions we did not observe any results whatsoever to warrant continuance of this form of therapy. As there

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From the Department of Medicine, University of Minnesota.

RUPTURED DIVERTICULUM OF THE JEJUNUM

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DIVERTICULA of the small intestine, as a whole, are not of such rare occurrence when we consider the reports of our roentgenologists who occasionally find one or two diverticula in the duodenum during a gastro-intestinal series, or the finding of an occasional Meckel's diverticulum of the ileum during a surgical or postmortem procedure.

Diverticula of the jejunum and especially multiple diverticula are rare. Only one-third of the cases reported are multiple. Our local roentgenologists and pathologists who have done many thousands of examinations fail to recall having seen more than a half dozen cases of diverticula of the jejunum. Less than 250 cases have been reported up to 1946. The first x-ray diagnosis of jejunal diverticula is credited to J. T. Case[1] in 1920.[4] In a series of 6847 gastro-intestinal series he found four patients with one or more jejunal diverticula and in the same group eigthy-five cases of duodenal diverticula.

The surgical importance of jejunal diverticula is dependent on the symptoms produced and these are dependent on size, mobility and drainage. The percentage with good drainage giving symptoms is evidently very small. Dwegney and Bailey[2] report a case of multiple diverticula of the jejunum with the diverticulum causing trouble holding one-half pint of fluid and extending well into the mesentery of the gut. It had a small outlet, was rigidly held and had no musculature in its walls to expell contents. This patient had been an invalid for years, had several operations and had been put in the nervous dyspepsia class. The diagnosis was found finally by x-ray. Resection, end-to-end anastomosis and complete recovery resulted.

F. F. Rudder[4] reports a similar case as to size with acute diverticulitis. This diverticulum was on a small pedicle and was attached to the dorsum of the jejunum. He also makes the unusual observation: "In the couse of surgical operations requiring an inspection of the stomach and upper gastro-intestinal tract, I have encountered both single and multiple diverticula of the jejunum of fairly numerous occasions. In no instance either pre- or postoperatively had this condition given rise to any symptoms."

J. A. Johnson[3] reports a case of multiple diverticula of the jejunum with one becoming inflamed causing adhesions and a volvulus, necessisating resection. He did an end-to-end anastomosis. This seventy-two-year-old man had several months' history of symptoms simulating partial obstruction.

Van Ravensway and Winn[5] report a case of small jejunal diverticula found by x-ray to be lying largely in the mesentery. Poor drainage of the diverticulum kept up a chronic inflammation until the sac was removed, and the small stump inverted with purse string sutures. Their paper gives a splendid discussion of the whole subject of jejunal diverticula.

Etiologically, jejunal diverticula are classed as congenital and acquired. The congenital type are supposed to be remnants of accessory epithelial nodules and to have a muscular coat, whereas the acquired type have only the peritoneal and mucosal layers. It is quite evident, however, that to get the multiple diverticula which develop on the mesenteric side of the gut where the blood vessels enter the gut wall, there must be a marked congenital absence of musculature development which permits intra-gut pressure to blow these "bubbles."

Case History

The patient, Wm. M., aged seventy-nine, a retired locomotive engineer, came to our office January 15, 1946, complaining of pain and tenderness at the navel. He stated that about two weeks before, he had fallen, striking his abdomen. He had immediate pain which had persisted, though the degree of pain was less, but local tenderness to pressure was increasing. He further said that for three days he passed blood in his urine following the fall. His temperature was 100.2° F. He was a thin wiry type with a low blood pressure and no marked arteriosclerosis. He stated he never was sick, had to take something for constipation, had a good appetite and slept well. There was no frequency of urination, though he had a moderately large prostate. Urine was negative for blood, albumin or sugar. At the navel there was a red indurated very tender area about ready to discharge pus. With a little local anesthetic this lesion was opened and drained of considerable pus. He was sent to the hospital after first giving him 100,000 units of sodium penicillin in 8 c.c. of water into the knee joint. At the hospital, hot continuous compresses and 120,000 units of penicillin daily gave him considerable comfort. That there was still considerable

deep slough and pus was evident and on January 28, 1946, the incision was enlarged and free drainage obtained, Colon bacillia were found in smear and culture. On his fourth postoperative day a very copious discharge appeared which excoriated the skin. It was evident that a small bowel fistula was present. The abdominal wall inflammation rapidly subsided but there remained a firm mass underneath which was still tender to pressure. There was a well-established small bowel fistula pouring out digestive fluid which required free use of aluminum paste to keep the skin comfortable. Within a few days he was eating well and walking about very comfortably except for a large left inguinal hernia which he had not been able to control with a truss.

He was operated upon under sodium pentothol induction and intra-tracheally administered cyclopropane on February 13, 1946. The elliptical incision centered the navel and was made to remove it. A loop of jejunum was found attached to the abdominal wall under the navel. Its lumen was not constricted. On either side of this attachment were several diverticula of the intestinal wall. The jejunum was dissected free from the abdominal wall; its attached surface had been the location of a ruptured inflamed diverticulum (Fig. 1). A circular invaginating suture supplemented by interrupted muscle and peritoneal suture closed off the raw area. This was re-enforced by omentum which was attached at the mesenteric border. Starting about ten inches from Treitz ligament were some fifteen diverticula in the next two feet of jejunum. These varied in size from the end of the average finger to larger than the end of the average thumb (Fig. 2). They were all on the mesenteric side of the bowel. The abdomen was closed with layer sutures also using some buried stainless steel wire sutures to support the extra tension where the navel was resected. The whole procedure went smoothly so that while the abdomen was being closed, the large left inguinal hernia was repaired, removing the cord and testicle to facilitate rapid and adequate closure. Nasal Wagensteen decompression, Varco feeding, free use of penicillin and the usual supportive handling resulted in a very smooth recovery.

We are free to confess that jejunal diverticula as a causative factor were not thought of in our diagnosis, though a Mekel's diverticulum was considered. Since this seventy-nine-year-old patient was having trouble here for the first time, neither an embryonic vitelline duct nor allantoic remains was a factor in the present trouble. Yet, he had a mass under the navel discharging small bowel contents and he also had passed blood in his urine for three days. There had been no evidence of a hernia and there was not a deep umbilical dimple which might encourage infection. Obviously, trauma was the causative factor.

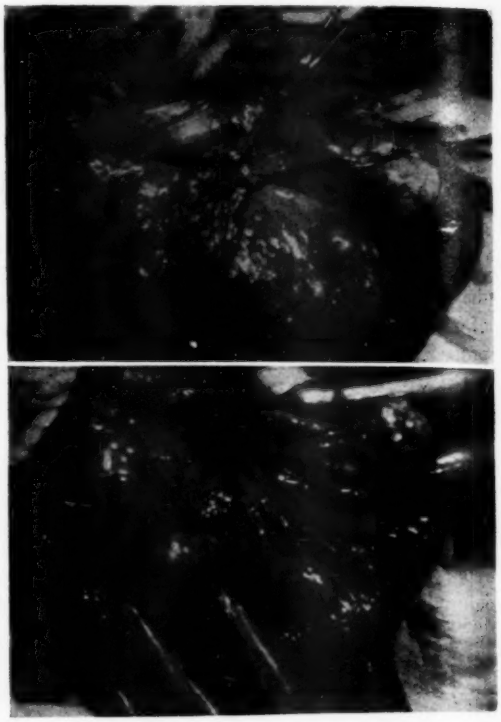

Fig. 1. *(above)* Hemostats outlining denuded jejunal area with fistula near lower left hemostat.

Fig. 2. *(below)* Other intact diverticula of the jejunum showing variation in size. Photographed by Dr. A. E. Borgen.

A barium enema in this case showed no colon diverticula or other pathology.

Summary

We have reported a case of multiple acquired diverticula of the first part of the jejunum, in which a fall caused the rupture of one of the diverticula. A localized abscess ruptured into the abdominal wall to be followed by the formation of a fistula draining intestinal juices.

Closure of the fistulous remnant of the ruptured diverticulum was followed by an uneventful recovery.

References

1. Case, J. T.: Diverticula of the small intestine other than Meckel's diverticulum. J.A.M.A., 75:1463-1469, (Nov. 27) 1920.
2. Devegney, F. E. C., and Bailey, H.: Diverticulum of jejunum. Brit. M. J., 2:98, (July 25) 1942.
3. Johnson, J. A.: Diverticula of jejunum. Minnesota Med., 28:395-396, (May) 1945.
4. Rudder, F. F.: Acute diverticulitis of jejunum—case report, Surgery, 14:921-923, (Dec. 1943.
5. Van Ravensway, A. C. and Winn, G. W.: Jejunal diverticula; case report. Am. J. Digest. Dis., 10:108-111, (March) 1943.

INDUSTRIAL HEALTH IN NAVY WAR PLANTS

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OUR Navy is a fighting force. It is in this light that we think of it. But behind this force is a secondary or an industrial force, upon which the maintenance, repair, and supply of the "fighting fleets" are vitally and intimately dependent. The ships and planes with their weapons and impedimenta would soon be helpless without the home shore bases. The immensity of this task and of this obligation can be illustrated by the fact that the Navy was the second largest employer of civilian labor in the country. At the peak of production during the War, more than 650,000 civilian workers labored in our continental Navy Yards, Air Stations, Ordnance, and Supply Depots. All these employes were on Civil Service.

A relatively small group of Navy officers and men were detailed to manage these industrial activities. The Navy Medical Department undertook the care of these civilian workers for all their occupational injuries and diseases, and for such other on-the-job illnesses as necessary, and as were reasonable.

About a year before Pearl Harbor The Bureau of Medicine and Surgery of the Navy inaugerated an industrial Health program in all the many shore naval industrial activities. Small groups of medical officers were enrolled for a three-month course of Industrial Hygiene at Columbia University and at Harvard in preparation to the carrying out of this program. At first the idea of a medical officer reporting to a Navy activity as an industrial hygiene officer within the medical organization was a novel innovation, and not too well received.

The duties of the Industrial Medical Officer were varied and flexible. Much was dependent upon the size and type of the industrial activity. To begin with, he was to make a careful survey of the entire plant. In this task, at many yards, he had the professional assistance of a chemical engineer trained in industrial hygiene as well as a laboratory. He would acquaint himself with the type of jobs available and their job requirements; he studied the hazardous and potentially hazardous occupations in collaboration with the Safety Officer. All this helped immeasurably in advising the command on medical and public health problems relative to the workers and the plant. Further, the Industrial Medical Officer was to aid in the establishment and development of the yard's industrial dispensary. In this dispensary there was always a great deal of activity. The preplacement physical examinations were usually performed here. This examination became increasingly important as the years of the War lengthened, and the quality of the workers on the labor market diminished. The knowledge of the types of jobs available and the infirmities of the applicant had to be fitted together to produce the greatest efficiency for the plant and the protection of the worker's health. By 1943 almost no worker was too disabled to find work in a War plant. Cardiacs, epileptics, psychopathic personalities, the very old and school children, all began to appear in proportionally greater numbers for employment. It was facetiously said that the physical examination was primarily to "feel if the applicant is still warm" before he is hired! Thus, it was necessary for the Industrial Medical Officer to be in close co-operation with the Personnel Relations Officer, the Safety Officer, and the civilian supervisors in the shops. Epileptics had to be placed under the eye of an advised and sympathetic boss at a job at which he could neither injure himself, his fellow workers, or property; the obese middle-aged housewife with the troublesome varicose veins and many household duties to perform after work-hours, had to be provided with a job at which she could be seated to work much of the day; the cardiac and hypertensive had to be provided ground-level work, preferably away from machinery; the alcoholic, the stout woman with chronic gall-bladder disease, the anemic spinster, and certain others could not be permitted to work in jobs requiring the use of benzol, or carbon tetrachloride, or as radium dial painters. Every plant had a veritable living museum of pathology.

Periodically, workers engaged in hazardous, or potentially hazardous jobs were examined. X-ray films of the lungs were made on the sand-blasters

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using silicates; complete blood counts were studied on those engaged in work exposing them to benzol, toluol, or other related benzene compounds, or the chlorinated hydrocarbons; basophilic aggregation tests were done on those exposed to the lead hazard; the radon content in breath samples was determined for the radium dial painters, along with complete blood counts and physical examinations; crane operators, truck drivers, and others operating power equipment required complete physical examinations with special attention to their visual acuity. Any evidences of toxic absorption called for investigation of the employe as well as the processes in which he was engaged.

By 1944 many of the smaller plants were employing as high as 45 per cent of women workers. Almost no job was too abnoxious or difficult for some of the girls. But their entrance into the working force of an industry brought with it many new problems. More and separate washroom facilities were needed; more space and facilities were needed for the dispensaries, and in proportion, more beds to care for them in minor temporary illness on the job. Frequently, the medical officer had to act as an intermediary for the woman worker and some hard-boiled strawboss in explaining tactfully her inefficiency or temporary absence with dysmenorrhea or early pregnancy. In the main, with the advent of women in industry, the average shop was much improved in cleanliness, and one may say, in hominess. Bouquets of flowers, ribbons, lipstick and other evidences of femininity soon made their appearance to brighten up dreary and monotonous work benches and shop corners.

There were always injuries to be cared for in the Industrial Dispensary, in spite of an active and vigorous safety program. These injuries varied in severity and type with the nature of operations of the particular yard. In the machine shops there were always cases of foreign bodies in the eyes and hands, also lacerations of the fingers and hands, cutting oil dermatitis, fractures of the toes and metatarsals as a result of dropping heavy objects on the feet accidentally. In the aircraft assembly and repair shops there were always falls from the wings or fuselage of the planes. In the shipyards the heavy type of industry brought more severe injuries of various types.

Then there is the more human side of the work of the industrial medical officer. After the worker becomes better acquainted with this officer and with his relative position in the plant, he finds that he can confide in him and seek his aid in those intimate details that are upsetting him mentally and emotionally, causing him to be absent frequently, or to be performing his work poorly, or to be disturbing his relations with his fellow workers. This is now frequently referred to the psychosomatic phase in the practice of medicine. Innumerable incidences could be recounted by the physicians in industry of services in this direction. Frequently a man's social life can be straightened out, and his relations with his boss and his fellow workers brought into harmony.

A program that was looked askance upon at its inception, was regarded as an important asset before the War's end.

ETHYLENE DISULPHONATE IN ALLERGY

(Continued from Page 690)

were no results in these observed cases, there seemed no need of any control cases.

(Material furnished by the Spicer Gearhart Company of Pasadena, California.)

Bibliography

1. Bartlett, Clifford L.: Treatment of the allergic state in children with ethylene disulphonate. Arch. Pediat., 61: 311-316, (June) 1944.
2. Editorial: Ethylene disulphonate as asthma cure. J.A.M.A., 120:842, (Nov. 14) 1942.
3. Evans, Badman, and Maisin: The chemical control of allergy. M. Press & Circ., 203:5273-5274, (May, June) 1940.
4. Shannon, W. Ray: The more recent approaches to allergy. Minnesota Med., 28:993, (Dec.) 1945.
5. Smith, Austin: The allergosil controversy. Victor News, 18:3, (March) 1946.
6. Smith, Norman M.: Associated pathologic conditions and their influence in allergic states. Clin. Med., 51:323-326, 1944.
7. Wasson, Valentina P.: Ethylene disulphonate in the treatment of allergic children. Arch. Pediat., 60:511-517, (Sept.) 1943.

CLINICAL-PATHOLOGICAL CONFERENCES

HORMONAL DYSCRASIAS OF THE BREAST

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DR. A. H. WELLS: It is our intention to present a brief review of the hormonal dyscrasias of the female breast, including the conditions generally discussed under the subject of chronic cystic mastitis. This presentation is a preview of a more complete report of a current study of all the surgical breast cases treated in this hospital during the past ten years. Although the terminology of the various lesions encountered under this broad subject is almost as varied as the number of authors describing it, nevertheless, there is considerable agreement as to the various histologic and clinical manifestations. An ever-increasing volume of group studies pertaining to the relationship of the hormonal dyscrasias to cancer of the breast and the results of varied therapeutic efforts give promise of some clarification of this frequently discussed disease process.

Classification

As yet the classification cannot be on an etiologic basis. The next best arrangement is an anatomic division of the various interrelated manifestations comprising this closely allied group of breast diseases. The lines of demarcation between the physiologic and pathologic are impossible to draw with any degree of certainty. It appears that any one type of lesion is an exaggeration of some part of the normal physiologic changes of the breast as seen during puberty, menstrual cycle, pregnancy, and menopause. These include (1) intralobular connective tissue proliferation, (2) glandular and ductal hyperplasia, (3) ductal dilatation, (4) absorption of desquamated and secretary debris from ducts, and (5) lymphocytic infiltration. Although there is considerable overlapping of the various hormonal dysplasias of the breast, most cases have one form of change predominating.

The pathologic variants of the physiologic entity of intralobular connective tissue proliferation include (1) excessive diffuse intralobular connective tissue proliferations of varying degrees which tend to progress from edematous and cellular lesions, adenofibrosis (Fig. 3), into old hyalinized poorly cellular connective tissue (Fig. 4) sometimes called chronic fibrous mastitis; and (2) localized fibroadenomata (Fig. 5) which are generally not included in the classification of chronic systic mastitis. However, there is no sharp line of demarcation between this local manifestation (fibroadenoma) and the more diffuse forms of connective tissue proliferation. The interlobular connective tissue is much less active than the intralobular fibrous tissue and plays no important part in breast dysplasias. Combinations of intralobular connective tissue and glandular proliferation may be in the form of diffuse, patchy, or isolated lesions. These have at times been called intraductal papilloma (Fig. 6), sclerosing adenoma (Fig. 7), fibroadenoma (Fig. 5), and diffuse adenofibrosis (Fig. 3).

The lesions with predominant epithelial features more truly represent an exaggeration of the process of glandular and ductal hyperplasia, our second physiologic entity. These may be in the form of adenomas or layered and papilliferous epithelial hyperplasias of ducts (Fig. 8). Diffuse, patchy, or isolated examples of adenomatous, intraductal, and sclerosing adenomatous forms of epithelial hyperplasia of varying degrees of severity are found. There appears to be a progression from tiny epithelial protrusions into duct lumina to large papillomatous growths. Large intraductal papillomata (Fig. 6) are generally considered a pathologic entity. However, in many instances there is an interconnection between this lesion and similar papillomata found in association with other lesions of chronic cystic mastitis. Thus, like the intralobular connective tissue hyperplastic changes, the glandular and ductal epithelial growths can be found in diffuse, patchy, and isolated forms.

The physiologic manifestation of ductal dilatation frequently exceeds normal limits and generally is a diffuse type of lesion involving many ducts, simple cystic mastitis of the multiple small type (Fig. 9). Isolated lesions of a large size producing discrete cysts rather than uniformly dilated ducts should be separately classified as cystic mastitis of the large isolated type or blue-domed cysts (Fig. 10). Various degrees of ductal and glandular dilatation are generally expected to be found associated with any combination of the other hormonal dysplasias.

Interference with the absorption of desquamative and secretory debris from tubules (Fig. 9), although commonly seen, appears to play a role of lesser importance than the other alterations of physiologic activities of the breast. This material may accumulate to the point of forming pasty casts of dilated large tubules throughout the breast. In some instances it may burst out into surrounding tissue causing foreign body inflammatory reactions. In other instances a low-grade lymphocytic infiltration about the ducts (Fig. 10) may be indicative of its irritative nature. A slight lymphocytic infiltration of the intralobular connective tissue does occur in the normal breast of menstruating women. Exaggerations of this process appear to have led to the misnomer of "chronic cystic mastitis."

From the Department of Pathology, St. Luke's Hospital, Duluth, Arthur H. Wells, M.D., Pathologist.

For practical clinical purposes, there is a tendency in the literature concerning hormonal dyscrasias to divide the cases into a few more or less distinctive groups depending upon both clinical and histologic characteristics.

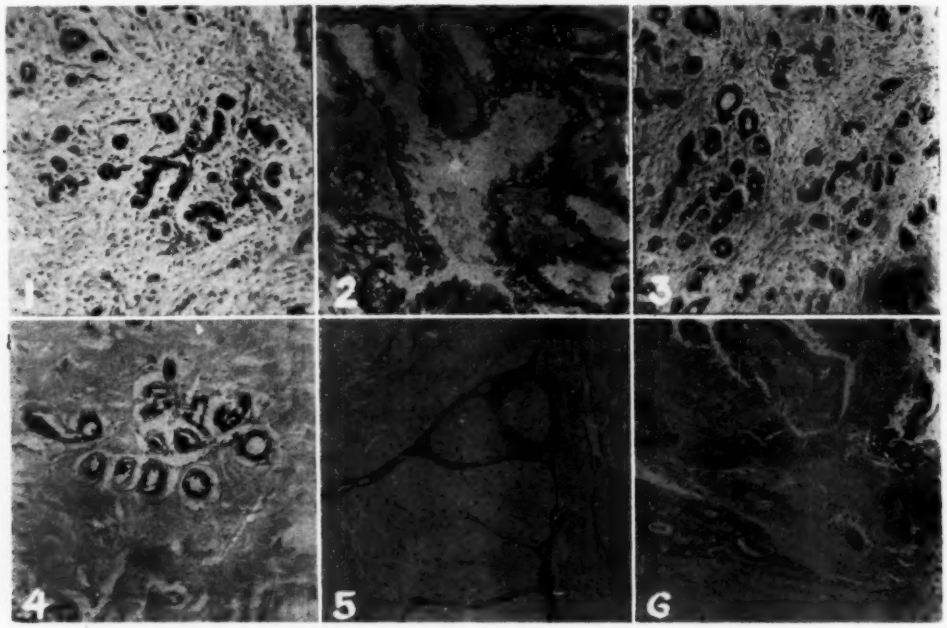

Fig. 1. Normal mammary lobule with ducts, glands, periacinar and periductal connective tissue and extralobular connective tissue.

Fig. 2. Normal lactating breast with dilated ducts and glands, hyperplastic lactating epithelium, edematous intralobular connective tissue.

Fig. 3. Adenofibrosis with proliferation of acini and periacinar connective tissue.

Fig. 4. Chronic fibrous mastitis with hyalinization of intralobular connective tissue.

Fig. 5. Fibroadenoma with extensive intraductal hyperplasia of periductal connective tissue.

Fig. 6. Intraductal papilloma with the base of the papilloma visible.

This is particularly important in connection with the evaluation of carcinogenic tendencies of the different lesnons. Fibroadenoma (Fig. 5) is not generally classified as a form of chronic cystic mastitis, possibly because it so frequently appears in young women as a discrete encapsulated mass. There is a second large group of younger women suffering from painful, firm breasts which on biopsy reveal mild exaggerations of the diffuse proliferation of intralobular connective tissue and glandular elements (Fig. 3). This general group has been designated as diffuse adenofibrosis by Cole, mazoplasia by Cheatle and Cutler, and mastodynia by Geschickter. A third fairly well-defined group are women with an isolated large cyst (Fig. 10) occurring generally near the menopause. A large part of the remainder of the women with hormonal dysplasias can be divided into two overlapping groups occurring most frequently between thirty and forty-five years of age. These are multiple small simple cystic mastitis (Fig. 9) and those commonly referred to as Schimmelbusch disease or adenocystoma (Fig. 8). There is generally a rather diffuse but mild to moderate dilatation of ducts and glands with varying amounts of epithelial, especially intraductal epithelial, proliferation in adenocystoma. Histologically adenocystomata can be separated into the benign and precancerous lesions dependent primarily upon the degree of epitheial noeplasia found in biopsy material and not upon clinical criterias.

Etiology

The principal etiologic theories of chronic cystic mastitis include: (1) secretory retention, (2) inflammation, (3) local tissue predisposition, (4) involution, and (5) endocrine. Although there is considerable disagreement as to the various etiologic factors and their importance, one can detect an unquestionable trend toward the acceptance of the endocrine theory and its relation to the various manifestations seen in this group of conditions. This is born out when we consider the following generally recognized features: (1) its absence before puberty, (2) its absence or disappearance after natural or artificial menopause, (3) its disappearance during pregnancy, (4) its common occurence in women without children, and (5) its least incidence among women with large numbers of children. Measurements of follicular and lutein hormones in women with breast lesions have shown decided variations from the normal

in the hands of some authors. Geschickter[15] feels that there is an inbalance between the follicular and lutein hormones with a preponderance of the follicular hormone. Several authorities have reproduced the histologic ence of female sex hormone, may even resemble activity of lactation. After birth, the breast enters a quiescent period due to disappearance of the female sex hormone.[27]

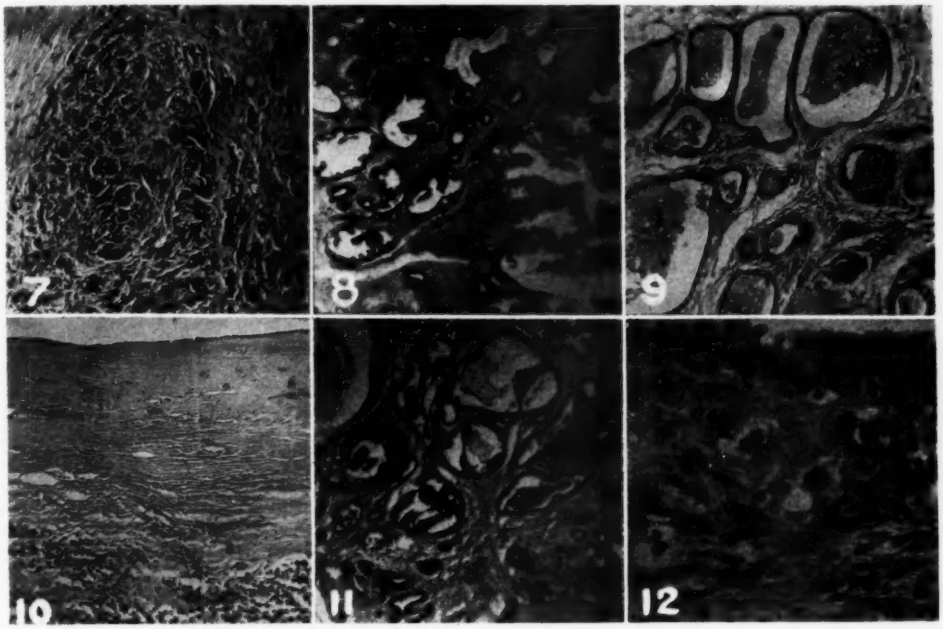

Fig. 7. Sclerosing adenoma with hyperplastic acini and periacinar connective tissue.

Fig. 8. Cystadenoma with much intraductal epithelial hyperplasia.

Fig. 9. Simple cystic mastitis small type with intraductal blood and cellular debris.

Fig. 10. Simple cystic mastitis large type with epithelial lining and thick hyalinized connective tissue wall with lymphocytic infiltration.

Fig. 11. Cystadenoma with fatal ductal cancer.

Fig. 12. Adenosarcoma with malignant transformation of the intralobular connective tissue. The benign ductal epithelium of the original fibroadenoma is visible.

manifestations of chronic cystic mastitis in different animals by the use of the various forms of follicular hormone.

Physiology

Dr. H. H. Joffe: A brief discussion of the physiologic changes which the mammary gland undergoes may help to clarify some of the puzzling problems associated with the involutionary or hormonal process of this condition. The correlation of estrin to the production of carcinoma will be discussed in another portion of this paper.

The morphologic appearance of the breast in its various stages of development and physiologic response bears an important relationship to certain pathologic states, and the breast, like the endometrium, is constantly undergoing periodic changes from birth to senility.

The breast of the newborn is characterized by few ducts, practically no acini and scanty periductal connective tissue. Epithelial proliferation, due to the pres-

As the result of ovarian activity at puberty, the breast enlarges with newly formed ducts and acini and hyperplasia of both the pericanalicular and periacinous connective tissue which may occasionally give rise to fibroadenoma. The ducts, at times, are dilated possibly due to colostrum and desquamated epithelium.[11,26,27]

According to Taylor[33], the painful breast exhibits an increase in the premenstrual vascular changes. This stage in the physiologic process is characterized by budding and new duct formation with epithelail activity and round cell infiltration.[26,27]

Lewis and Geschickter[21] examined forty-four pieces of tissue taken from breasts during operations for fibroadenoma and carcinoma at known intervals in the menstrual cycle and noted:

1. Expansion of ducts coincides with the rise of theelin in the blood.
2. Increase in acinar elements corresponds with the rise of progestin.
3. Menstruation was indicated and accompanied by round-cell infiltration and desquamation of duct

epithelium which coincides with the fall in both theelin and progestrin in the blood which occurs with menstruation.

4. Menstruation is followed by a short resting period with disappearance of round-cell infiltration, reduction in the size of the acini and a more compact stroma.

Rosenburg[29] found, on cut sections of breast and uterus on cases coming to autopsy, a corresponding similar sexual cycle in the mammary gland and endometrium which was confirmed by Pelmo and Sedening.[29] With the approach of menstruation, the cells lining the ducts become larger with branching new ductules and secretion into the ducts occurs. Involution begins a day or two before the onset of the flow, with degeneration and shedding which is comparable to the shedding of the superficial layers of the endometrium during menstruation.[29]

The source and nature of the impulse which produces the secretory or lactating breast, is a great controversy. It is assumed that the removal of the inhibitory factor of the placenta and fetus stimulates the breast to the secretory phase which is characterized by replacement of fat and connective tissue by enormous growth of ducts and acini with enlargement of lobule and hypertrophy of the epithelium.[26,27] The greatest physiologic change in the breast occurs during pregnancy in which, under the influence of corpus lutem, the epithelium grows at the expense of the connective tissue.[26,27] After pregnancy, the breast enters a state of rest but never completely returns to that seen between puberty and the first lactation.[11]

Lewis and Geschickter[21] studied seventeen specimens of breast tissue excised with different lesions during various stages of pregnancy and noted:

1. Rapid proliferation of glandular elements in the first trimester of pregnancy when progestrin is highest in the blood.

2. Maturation of cells of the ducts and acini with dilatation of lumina is most marked during latter half of pregnancy when secretory level of theelin is at its height.

3. Desquamation occurs in the latter half of pregnancy before lactation occurs.

The foregoing discussion clearly illustrates the almost unbelievable amount of both epithelial and fibrous changes that the normal breast undergoes during its various physiological phases from puberty to senility.

Clinical Recognition

The manifestations of chronic cystic mastitis are relatively few and because of the extreme variability of complaints, it is most difficult to make the diagnosis on symptoms alone. It, therefore, behooves surgeons and clinicians to fully appreciate the art of breast palpation.

The main clinical features may be summarized under the following headings:

1. Pain is the most constant complaint. It varies in intensity and is by no means present in all cases and is described as a diffuse aching which may increase in severity during menses. According to Rogers and Nathanson[31], pain and tenderness or both occurred in about one-half of their cases.

2. The hormonal dysplasias can occur at any age during the active sexual life of women but is most frequently between the ages of thirty-five to forty-five years.

3. Nipple discharge occurs in a small per cent of cases and is not diagnostic. According to Cole[10], a discharge from the nipple will be noted in 5 per cent of cases. Lewis and Geschickter[21] state that 3 per cent to 7 per cent show a serous, milky, or bloody discharge. Martin[25] states that a serous or sero-sanguinous discharge is indicative of ductal papilloma, cancer, or chronic cystic mastitis. Approximately 50 per cent of the cases with bleeding were cancerous.

4. The physical findings vary somewhat depending upon the type of lesion. In the clinical classification already sited, the group of women with fibroadenomas will have a discrete, freely movable, firm, tumor mass. A second group of fairly young women whose chief complaint is pain may have an atrophic breast which on palpation has a diffuse, fine, granularity with a firm distinct saucer edge. There are no palpable discrete nodules. Those women at or near the menopause with discrete, rather firm to hard, isolated, freely movable nodules are likely to reveal blue-domed cysts. Aids to its recognition consist of transillumination and aspiration. A fourth division of women have coarse distinct nodules in various parts of one or both breasts. These may or may not be associated with pain. Resection of the involved parts reveals multiple cysts and histologically one or more of the several dysplasias, including varying degrees of epithelial hyperplasia and neoplasia, may be associated with the cysts.

Carcinogenesis

Dr. A. H. Wells: There is a great diversity of opinion regarding the anaplastic potentialities of chronic cystic mastitis and its various entities. These disagreements may be traced to: the small number and types of cases studied, methods employed, varied terminology used, and rarely pure prejudice. If there is a tendency for breasts with chronic cystic mastitis to develop cancer, it must be in a small percentage. Therefore, large numbers of cases must be studied to avoid statistical errors. Most authorities agree that those types with papillomatous hyperplasias in the ducts (Fig. 6) and adenocystoma (Fig. 8) have a greater cancerous potentiality than those with simple cystic change (Fig. 9) or fiibroadenomata (Fig. 5) or adenofibrosis (Fig. 3). For practical purposes, then, we must be able to predict the percentage of carcinomas to be expected in any one type of the hormonal dyscrasias.

The two methods of group study in common use include: (1) the anatomical association of chronic cystic mastitis in patients with cancer of the breast (Figs. 11 and 12) and (2) a follow-up study of surgical cases in which chronic cystic mastitis has been diagnosed histologically. The first method has been bitterly criticized by the opponents of a cancerous relationship. The latter method might well prove that 1 per cent of the

entire group of patients with chronic cystic mastitis will develop cancer of the breast within a five- to ten-year period, whereas the expected incidence in the same age group of women in the general population is somewhat less than 0.5 per cent. When the various entities of chronic cystic mastitis have been studied over a five- to ten-year period in sufficient numbers (over 500 each), we are likely to find that the groups intraductal papilloma (Fig. 6) and adenocystoma (Fig. 8) when treated by simple local resection of palpable lesions may subsequently develop cancer in from 3 to 6 per cent of cases. If this prediction is true, the anaplastic potentialities of these lesions are in the realm of surgical significance. We anxiously await the future solution of this problem.

It should be noted that mammary carcinoma has been produced in experimental laboratory animals by the injection of estrogens.[1,14,17,20,21,22,26] These animals have developed in sequence the various histologic manifestations of chronic cystic mastitis with the ultimate transformation to carcinoma.

Treatment

Cancer is by far the outstanding disease governing the therapy of breast lesions. It represents about 25 per cent of the malignancies of women and is one of the most treacherous. If it were not for cancer, the therapy of the hormonal dysplasias would be of little practical importance outside of that for painful breasts and draining nipples. We are not qualified to enter the controversy of estrogenic versus testosterone or lutein hormone therapy for painful brests except to say that the question seems far from a settlement.

There are three rules regulating breast therapy. It cannot be too often repeated that a simple nodule in the breast is malignant until proven otherwise. A second safe rule is that if there is any question about the possibility of malignancy take a biopsy. The good surgeons of our acquaintance have about a 50 per cent batting average in distinguishing cancer of the breast from benign lesions. Furthermore, about 50 per cent of the biopsied lesions are malignant. A third rule which we advocate is that if the biopsy proves to be a malignancy of any type including the slower growing comedo, mucoid or papillomatous cancers, a radical resection is indicated. The patient's observations as to the duration of the disease are never dependable. The physician's clinical interpretation of axillary metastasis is wrong about as often as it is right.

In our opinion, the greatest problem of breast therapy confronting the surgeon and pathologist today is the question of the frequency of malignancy stemming from the hormonal dyscrasias (Figs. 11 and 12). If the implications of Geschickter's[15] follow-up of 192 cases of "adenosis" [Schimmelbusch's disease or adenocystoma (Fig. 8)] are correct, then 3 per cent of the patients with this condition will develop cancer in from five to ten years after a surgical excision. We disagree with his advice of conservative watching-and-waiting therapy. Why should a woman be made to bear the burden of chance with death when a bilateral simple mastectomy will remove this real danger? Can you imagine a physician taking a 3 per cent chance of dying in from five to ten years because he would not have his breasts removed by simple excision? Larger group studies of the incidence of cancer following local excisions of the various entities of chronic cystic mastitis are necessary before the facts will be known. Then it will be a matter of balancing cosmetic, functional values with surgical risks against the chances of an early death.

Summary

A brief review of the classification, etiology, physiology, clinical recognition, carcinogenesis, and treatment of the hormonal dyscrasias has been covered. (1) A simple working classification of chronic cystic mastitis using clinical as well as histologic criteria is preferable to the cumbersome listing of the many overlapping pathologic entities. (2) There is an unquestionable trend toward acceptance of the endocrine theory of etiology. (3) The normal breast undergoes an almost unbelievable amount of epithelial and fibrous change during its various physiologic phases from puberty to senility. (4) The clinical differentiation between benign and precancerous multiple breast nodules must be supplemented by biopsy. (5) Large group studies of the various entities of chronic cystic mastitis are necessary for the final proof of carcinogenic tendencies of the different types. (6) It is entirely possbile that adenocystoma (Fig. 8), and intraductal papilloma (Fig. 6) may have anaplastic potentialities of surgical significance. (7) The treatment of the hormonal dysplasias largely revolves about the differentiation from cancer and the possible precancerous nature of the various lesions of chronic cystic mastitis.

References

1. Atkins, H. J. B.: Chronic mastitis. (Hunterian Lecture). Lancet, 1:707-712, (Mar.) 1938.
2. Bell, E. T.: Textbook of pathology. pp. 728-732. Lea & Febiger, Philadelphia: 1944.
3. Bennett, M. R.: Chronic cystic mastitis. Manitoba M. Rev., 25:191-193, (May) 1945.
4. Bloodgood, J. C.: The blue-domed cyst in chronci cystic mastitis; its relation to cure of cancer, to benign lesions of breast, and to educational program. J.A.M.A., 93:1056-1059, (Oct. 5) 1929.
5. Bloodgood, J. C.: Chronic cystic mastitis of diffuse, non-encapsulated, cystic adenomatous type (shotty breast). Ann. Surg., 90:886-903, (Nov.) 1929.
6. Cahill, J. A., and Caulfield, P. A.: Possible relationship of chronic cystic mastitis to malignancy. South. M. J., 31:245-251, (Mar.) 1938.
7. Campbell, O. J.: Relationship between cystic disease of breast and carcinoma. Arch. Surg., 28:1001-1056, (June) 1934.
8. Clagett, O. T., Plimpton, N. C., and Root, G. T.: Lesions of breast; relationship of benign lesions to carcinoma. Surgery, 15:413-419, (Mar.) 1944.
9. Cole, W. H.: Classification of chronic cystic mastitis. Surg., Gynec. & Obst., 79:109-112, (July) 1944.
10. Cole, W. H., and Rossiter, L. J.: Chronic cystic mastitis: with particular reference to classification. Ann. Surg., 119: 573-590, (Apr.) 1944.
11. Cutler, M.: Relation of "chronic mastitis," cysts and papillomas to cancer of breast. J.A.M.A., 99:2152-2157, (Dec. 24) 1932.
12. D'Abreu, F.: Chronic interstitial mastitis. Brit. J. Surg., 22:456-464, (Jan.) 1935.
13. Davis, H. H.: Cystic disease of the breast. A critical review. Surgery, 10:663-674, (Oct.) 1941.
14. Geschickter, C. F.: Endocrine aspects of chronic cystic mastitis. South. Surgeon, 10:457-486, (July) 1941.
15. Geschickter, C. F.: Diseases of the breast. Philadelphia: J. B. Lippincott Co., 1943.
16. Hesser, H. H.: Chronic cystic mastitis, a therapeutic problem. J. Kansas M. Soc., 45:311-312, (Sept.) 1944.
17. Hofbauer, J.: Hormonal gynaecological pathology and its clinical aspects. J. Obst. and Gynaec. Brit. Emp., 46:232-249, (Apr.) 1939.

(Continued on Page 717)

Miscellaneous

CATARACT EXTRACTION UNDER SODIUM PENTOTHAL

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This report covers 100 consecutive cases of cataract extraction under sodium pentothal anesthesia.

While this may sound fantastic, we have not had a single unsatisfactory result. In no case has there been any nausea, nor has the use of oxygen, or any form of stimulation been necessary.

Old age, diabetes, hypertension, nephritis, et cetera, are no contra-indications to its use. There is a fall in blood pressure which in most cases is desirable. The average dose is from 1 to 2 grams—usually less than 1 gram. The patient, when told he will be asleep, loses practically all apprehension of the operation.

The detailed procedure is as follows:

At 9 p.m., the night before operation, the patient receives 1½ grains of nembutal, one hour before operation, another 1½ grains of nembutal, and one-half hour before operation, 1/100 grains of atropine subcutaneously. In the operating room 2 minims of 4 per cent cocaine solution is instilled in each eye, and a mydriatic of choice. The eye is then prepared for operation, and on its completion sodium pentothal is administered. The average individual counts up to about twenty when sleep is produced. If there is any reaction, such as a sneeze or spasm when the conjunctiva is grasped, we wait a few moments and push the sodium pentothal until relaxation is complete.

I find the advantages as follows:

The operator is very much at ease with no need to hurry, knowing full well that the patient will cause no trouble. Before the use of pentothal I was never satisfied with lid relaxation, even with lid injection of novocaine. Previously it was my routine procedure, in nearly all cases, to do a canthotomy. Under this anesthesia, regardless of a deep set eye or narrow palpebral fissure, lid retraction is perfect, with most satisfactory exposure. There is no need of conversation with the patient who may be hard of hearing or speaks a foreign language, or of giving instructions which most patients do not follow or comprehend, anyway. As sleep is produced, dilation of the pupil is almost complete. A bridle suture is inserted, and the eyeball is fixed and remains so until the completion of the operation. Again I repeat, one may take all the time that is necessary. Any type of operation may be performed. The amount of pressure necessary to express the lens is entirely in the hands of the operator. In only three cases has any vitreous been lost. This procedure is ideal for intracapsular extraction. All of us have had patients who have been unruly, and for which they could not be blamed. This is eliminated. The patient is quiet on leaving the operating room, which is most desirable, and remains so from one-half hour to four or five hours.

The end result is the important thing, and under this procedure the results have been so much better than formerly as to leave no argument.

I have used sodium pentothal many times for other procedures. It is ideal for muscle operation, iridetcomy, enucleation, plastic surgery and even in mastoids.

My plea is—give sodium pentothal a trial.

X-RAY FILM OWNERSHIP AND USE

Not infrequently the question arises as to who has the right to an x-ray film—the patient, the roentgenologist or the referring physician or surgeon. Occasionally some ill feeling is engendered when a patient is denied a film for which he has paid and to which he feels entitled. More often the question arises as to the right of a physician other than the one originally referring the patient to the roentgenologist to view the x-ray film.

In deciding such questions, the patient's welfare is of the first consideration. It may be argued that what he purchases from the roentgenologist is his opinion, derived in part or entirely from the x-ray film and that the film is his roentgenologist's property.

The statement of policy adopted February 1, 1946, by the Board of Chancellors of the American College of Radiology for the guidance of raidologists and other physicians concerning the ownership and use of x-ray films seems worthy of general acceptance and is therefore reproduced herewith:

1. Roentgenograms should be used for the best interest of the patient.
2. The roentgenograms are the legal property of the radiologist or of the hospital in which they were made.[1] It is advisable, but not necessary, to mark on each film the statement, "Property of Dr. John Doe." Such a mark is particularly desirable if the radiologist delivers the films to the referring physician instead of filing them in his office or hospital department.

3. It should be the policy of the radiologist to make the films available for inspection by the physician who referred the patient for x-ray examination, along with a copy of the report of the radiologist. The best results are undoubtedly secured when it is possible for the radiologist and the referring physician to confer personally when the latter views the films.

4. If the referring physician or if the patient in behalf of the referring physician wishes to take the films away from the office or the hospital, it should be clearly understood that the films are "loaned" and should be returned after the loan has served its purpose.

5. If the patient dismisses the referring physician and goes to another physician, the films and the report should be made as freely available to the second as to the first physician who originally referred the patient. It is desirable that the patient notify the first physician of the change, and it may be assumed that he has done so, but even if this notification has not been made, the obligation of the radiologist is unchanged. When the second physician wishes to examine the films, it is assumed that he is doing so at the request of the patient.

6. If the referring physician objects to the submission of the films to the second physician or to the giving to the latter a copy of the radiologist's report, the radiologist is obligated to do so in spite of this objection. If the referring physician has possession of the films and refuses to release them, the radiologist, whose legal property they are, has the further right to take whatever action is necessary to get the films for the further benefit of the patient.

7. All films should be legibly and permanently marked so that the patient can be identified and the date on which they were taken can be determined. This is important because, under some conditions, a comparison of films just made with others made previously may be the crucial factor necessary to establish a diagnosis or to estimate the progress or regression of a disease.

8. When a medico-legal situation exists, the radiologist has a right to refuse to release the involved films if necessary for his own protection, except on a court order.

9. A liberal attitude regarding the release of films is more desirable than strict insistence on one's legal rights. It is better to run the occasional risk of losing films than to engender the enmity of a patient or of a physician by strict adherence to the rule, which in the past has led to attempts to make laws making the films the legal property of the patient.

10. In recognition of the universal importance of radiologic methods of examination, the principles regarding the use of roentgenograms outlined above are deemed by the American College of Radiology to be equally applicable to roentgenograms made by physicians other than specialists in radiology.

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[1]Whipple vs. Grandechamp, 158 N. E. 270 (Mass., 1927); Hurley Hospital vs. Gage, Circuit Ct. for Genesee County, Mich., April, 1931; McGarry vs. J. A. Mercier Co., 262 N. W. 296 (1931) 272 Mich. 501; Thocher vs. Barnum and Pinkham, Circ. Ct. for Ingam County, Mich., April, 1932; Lea vs. Otto, Mun. Ct. in City of Dayton, Civil Div., Aug. 4, 1932; Higgins vs. Lutheran Hospital Society of Southern California, Mun. Ct. of Los Angeles, Oct. 26, 1939; Hern vs. California Hospital and Snure, Superior Ct. of Cal. for City of Los Angeles (Case No. 461353), July 7, 1941; Spaulding vs. Bierman and Sinberg, Mun. Ct. of City of N. Y., Small Claims Part, Bor. of Manhattan, Nov. 23, 1945; Batchelder vs. Habershaw, Sixth District Ct. of R. I., January 7, 1946; 31 L. R. A. 283.

HYPERSENSITIVITY TO PENICILLIN

(Continued from Page 689)

mately three hours. For skin testing penicillin (commercial) of a different manufacturer was used, because none of the original batch of penicillin was available. Crystalline penicillin was not available for skin testing. Eleven days later, on January 31, 1946, an intradermal test with the same penicillin (commercial) was negative.

Summary

1. Two cases of hypersensitivity to penicillin (commercial) which bear a marked resemblance to the syndrome of serum sickness have been presented.

2. In both, the symptoms became evident after the cessation of penicillin therapy.

3. The symptom complex of generalized urticaria, elevated temperature, generalized adenopathy and polyarthritis or polyarthralgia, seen in serum sickness, was present in both cases.

Bibliography

1. Cormia, F. E., and Jacobsen, L. Y.: Bull., U. S. Army M. Dept., 4:694, (Dec.) 1945.
2. Criep, L. H.: Allergy to penicillin. J.A.M.A., 126:429, (Oct. 14) 1944.
3. Lyons, C.: Penicillin therapy of surgical infections in the the U. S. Army. J.A.M.A., 123:1007, (Dec. 18) 1943.
4. Price, D. E., McNairy, D. J., and White, E. L.: Sensitization to penicillin. J.A.M.A., 128:183, (May 19) 1945.

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NOTES ON THE HISTORY OF MEDICINE IN FILLMORE COUNTY PRIOR TO 1900

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(Continued from June Issue)

Unfortunately, the next chapters in the story have not been learned, but it seems a fair assumption that the organization maintained its existence by holding occasional meetings and electing officers. Only one specific reference to it has been noted, and that with regard to Dr. Milton A. Trow, of Chatfield, early in the second half of the nineties, when he was considering removal from Chatfield to Jackson, Minnesota, where he went in 1898 or early in 1899. In this period, when local adherents published a letter in praise of Dr. Trow, it was stated that "among the profession he is pre-eminent, stands at the head as President of the Fillmore County Medical Society; also is an officer and an active member of the Olmsted County Medical Society, as well as an honorary member of the Winona Medical Society." Record of the Fillmore County group, from that time until the merging of the Fillmore County Medical Society with the Houston County Medical Society, on May 2, 1904, has not been available. The late Dr. Hildus O. A. Nass, of Mabel, said: "To the best of my knowledge there was no Fillmore County Medical Society functioning in 1898, when I came here. I was a charter member of the Houston-Fillmore County Medical Society founded in 1904"; nor have other senior members of the profession of the county been able to recall activity of the society in the closing years of the century. The subsequent history of the two-county society through its merging with the Olmsted County Medical Society on November 14, 1932, and the joining of the three-county group with the Dodge County Medical Society on July 5, 1933, to form the Olmsted-Houston-Fillmore-Dodge County Medical Society was reviewed in "Notes on the History of Medicine in Houston County prior to 1900" (Guthrey).

Physicians of Fillmore County in the Minnesota State Medical Society.—Record of the individual activities of those early physicians of Fillmore County who were members of the county medical society and of the Minnesota State Medical Society is embodied generously in the transactions of the state organization. A few excerpts from the record are given or mentioned here. In the years from 1870 to 1875 pioneer members of the state society from Fillmore County were, in roughly chronological order of joining (most of them in 1870 and 1871), L. Redmon, W. P. Belden, R. W. Twitchell, A. H. Trow, M. Donnelly, C. H. Robbins, T. H. Everts, H. C. Grover, A. Plummer, R. L. Moore, A. F. Whitman and J. M. Wheat, the last of whom joined in 1875. Early in the eighties J. R. Johnson became a member and, in 1890, James H. Phillips and Milton A. Trow were admitted. In that long period from 1870 into the nineties, but particularly in the seventies and eighties, it was a rare meeting of the state medical society at which Fillmore County was not well represented, usually by more than one physician,

in the offices, on standing committees and on special committees and in contributed reports to the committees. There frequently were contributions from R. L. Moore, T. H. Everts and H. C. Grover, C. H. Robbins and J. M. Wheat; and the range of subjects was wide: obstetrics and gynecology; surgery, general and special, including amputations; treatment of gunshot wounds and fractures; repair of hernias, inguinal and strangulated, cystic sarcocele and peroneal rupture; tetanus; ophthalmology; asthma; epidemics; and the use and abuse of alcohol.

Dr. Moore gave many and varied reports, always concise and well stated. In 1876, in discussing the value of ergot versus quinine in obstetrical cases, he said: "Ergot does do efficient service if the article is good and the patient a proper one for its use. Quinia sulp. cannot begin to take its place. I do not believe quinene (sic) to be much of an oxytoxic." A few years later, in reporting on fractures, he favored the use of plaster-of-Paris bandages in the treatment.

Drs. Everts and Grover, uncle and nephew, who for several years were in partnership, gave reports of surgical cases that were illustrative of the recurring problems of the time and, in 1874, one in particular "showing the excellent results from the use of carbolic acid as an antiseptic remedy in dressing wounds." When a Norwegian farmer was injured severely by the revolving tumbling rod of a threshing machine, the rod cut the sleeve of the left arm on the outside and in the winding and twisting process that followed the "attachment of the deltoid muscle apparently acted as a fulcrum, the head of the humerus was torn entirely free of all attachments and thrust quite through the integuments lying exposed in the axillary space. . . . We delayed a thorough examination until the counsel of Dr. Karl Bendixe (Bendeke) could be procured. . . . We unanimously decided upon exsection of the head of the humerus; which operation was readily performed and the ordinary amputating saw used as the bone was so completely free of all soft parts. The large cavity was filled with the following solution of carbolic acid: carbolic acid, 40 drops, alcohol, one ounce; aqu., three ounces. . . . The arm was then put upon a pillow in a natural position, so as simply to bring the edges of the wound together, no stitches or other retentive means were employed. The wound was kept wet and thoroughly injected with the acid mixture. The wound healed most kindly. . . . The patient is rapidly recovering the uses of a perfect arm except the power to elevate it to a right angle with the body. This may not be considered one of the lucky cases among the happy accidents of surgery only; but it shows the wonderful effect of carbolic acid as a dressing."

Dr. Grover, who in 1875 was a member of the state legislature, in that year discussed the need of a state home for inebriates and offered to introduce any bill or petition that the state medical society saw fit in furtherance of the object, and Dr. Everts, an ardent prohibitionist, subsequently took a positive stand in the movement to procure the home. Dr. Grover at this meeting also presented for the inspection of the society a bill that had been sent to a member of the house which should compel physicians to respond to every case under penalty of $5.00 in case of sickness and that when patients were unable to pay for the services of a physician, the county should be obliged to pay at the rate of 75 cents on a dollar; this was voted to be a curiosity. There was placed in Dr. Grover's hands at this meeting, to present to the legislature, the report of a special committee on fees which favored fixing the price of postmortem examination at $25.00 instead of $6.00.

In 1877 Grover and Everts together reported in detail thirty-seven obstetrical cases in only eighteen of which was labor normal, with the final comment: "The small total, and the unnatural proportion of unnatural labors, is accounted for by the fact that midwifery is here very largely in the hands of nonprofessionals.

We are only called in cases of 'scare' or real difficulty." In 1879 in reporting an obstetrical case that was complicated by "expulsion of uterine fibroid under action of ergot," Dr. Everts in his description included parenthetically the following bit which the standing committee on gynecology respectfully preferred to the committee on education. It is included here because it describes a type of practitioner too common in those years:

> The patient was under the care of a physician who had never had the benefit of sufficient medical education to distinguish between vagina and uterus, but was fully competent to furnish that moral support and encouragement which are so frequently all that is required to supplement the efforts of nature in giving to the parturient woman that "happy issue out of all her affliction" so properly prayed for. The days of constant, sleepless labor, growing hourly more painful without result had, however, exhausted the virtue of these remedies, though not by any means the "doctor's" assurance. He know nothing whatever of the actual state or progress of affairs, except that "the waters broke yesterday." Nevertheless, he confidently "reckoned that she would get along all right."

And one final comment from Dr. Everts in the same year, regarding a case of amputation of a hand, leaving the thumb, recalls the early faith in the salubrity of Minnesota's climate. "The rapidity and certainty with which wounds of all kinds heal in this country, we believe, will warrant far greater risks in the direction of conservative surgery than we are encouraged by eastern authorities to make."

Of this early group of physicians, Dr. Robbins expressed special interest in the incidence and severity of asthma. Dr. Wheat's chief and most detailed report was that of a "case of intra-uterine fibroid tumor and operation." He was assisted in the surgical procedure by Dr. H. H. Haskins.

From the late seventies to the turn of the century, although the Fillmore County Medical Society was revived in 1882 by the action of Dr. R. L. Moore, President, Fillmore County had a diminishing representation in the state medical society. In 1897 Milton A. Trow and James H. Phillips were the only members from the county, and in 1899 Dr. Phillips was alone; for the next four years there was none. Promptly after the formation of the Houston-Fillmore County Medical Society in 1904, the organization obtained its charter from the state society and once more names of men from Fillmore County (as from Houston County, which also had been in eclipse) appeared on the roster: F. A. Drake, F. A. Gowdy and A. P. Lommen, of the older group; and W. B. Grinnell, A. B. Hart, G. A. Plummer, G. R. Reay and C. N. Woodruff, who had settled in the county as the nineteen hundreds opened. In succeeding years new names from both senior and junior groups were added.

Fillmore County Eclectic Medical Society.—Any comment on medical societies in Fillmore County should include the story of the Fillmore County Eclectic Medical Society which came into being shortly after, and obviously because of, the legislation of March 9, 1869, the act which was designed by the Minnesota State Medical Society to regulate the practice of medicine in the state and to discourage practitioners who were not of the regular school.

In the *History of Fillmore County,* published in 1882, there appear these few lines about the local eclectic medical group:

> "FILLMORE COUNTY ECLECTIC MEDICAL ASSOCIATION: This society was organized on the 31st of July, 1869, at the office of Dr. O. A. Case in Preston. The first officers of the Society were O. A. Case, President; John A. Ross, George A. Love, J. J. Morrey. The organization kept up until 1876, when it was dissolved."

In the light of information gained recently, it appears that the society was organized some weeks earlier than stated in this excerpt; that although Dr. Case undoubtedly was the first president, Dr. Ross did not enter Fillmore County until the autumn of 1869; and that George A. Love, although in due time a member of

the society, did not begin the study of medicine (with Dr. Ross as his preceptor) until 1870 and was not a qualified physician until 1874.

Extracts from the *Preston Republican* of 1869 are presented here because they give a record of the earliest transactions of the Fillmore County Eclectic Medical Society. In the issue of the newspaper of May 7, 1869, there appeared the following announcement:

FILLMORE COUNTY ECLECTIC MEDICAL SOCIETY: A Medical Society meeting was held at Preston, Monday, May 3, 1869, at which were passed the following resolutions, viz:

Resolved, 1st, that this society shall be known as the Fillmore County Eclectic Medical Society.

2nd, That any person duly qualified to practice medicine and surgery in all of their branches, and who can sustain a good and moral character, may become a member of the society.

3rd, That the society shall meet on the first Monday in each month for the promotion of its objects, and the transaction of business.

4th, That the object of the society shall be the improvement of its members, and the advancement of medical reform.

5th, That special meetings may be called by the President at the request of the members.

6th, That no amendment of the resolutions shall be made without a vote of two thirds of the members present.

7th, That the following bill of fees for medical services are unanimously adopted.

Counsel fee, or medical advice	$ 1.00 to $ 3.00
Each visit	.50 to 1.00
Each visit at night	1.00 to 2.00

If the distance exceeds one mile, mileage to be added at the rate of .50 per mile.

OBSTETRICAL OPERATIONS

Natural labor	5.00 to 10.00
Instrumental labor	15.00 to 30.00
Operations on the head and with trephine	15.00 to 25.00
Dressing each time	2.00
Miscellaneous, dressing cutaneous wounds, ulcerations, et cetera	2.00
Opening sinuses and abscesses	.50 to 1.00
Operations for hairlip	15.00 to 25.00
Extirpation of tonsils	8.00 to 15.00
Hydrocele, radical operation	5.00 to 25.00
Phimosis and paraphymosis	5.00 to 8.00
Paracentesis	5.00 to 12.00
Operation for fistula in ano	10.00 to 20.00
Reducing hernia	4.00 to 12.00
Reducing hernia by operation	25.00 to 60.00
Fracture of humerus and dressing	12.00 to 20.00
Other fractures and dressing	15.00 to 75.00
Dislocation, or fracture of fingers and toes, with dressing	3.00 to 5.00
Extirpation of encysted or cancerous tumors	2.00 to 20.00
Operation of lithotomy	10.00 to 100.00
Castration, complete	25.00 to 50.00
Castration, incomplete	10.00 to 25.00
Postmortem examination, where ordered by coroner	10.00 to 25.00
Examination of vaginum with speculum	2.00 to 4.00
Examination of lungs and heart with stethoscope	2.00 to 5.00
Malformation, operations for	10.00 to 40.00
Gonorrhea, simple	10.00
Syphilis	15.00 to 25.00
Operations for hemorrhoids	8.00 to 15.00
Amputations—the shoulder, hip, breast, leg or thigh, fore and back arm	25.00 to 100.00
Fingers and toes	4.00
Operation for aneurism	25.00 to 75.00

All other operations of complicated nature will be charged for according to the nature of the case.

On motion, the society adjourned to meet as per resolution.

J. W. EIGHMY, Secretary — O. A. CASE, President

On June 11, 1869, in the *Preston Republican* appeared the following:

Medical notice: A meeting of the Eclectic Medical Society will be held at Preston, Minnesota, on Monday the 14th of June, 1869, to consider any business that may properly come before it. All physicians in good standing are requested to attend.

G. (sic) W. EIGHMY, M.D., Secretary.

And in the issue of July 23, 1869, was the following:

MEETING OF THE FILLMORE COUNTY ECLECTIC MEDICAL SOCIETY: Pursuant to notice of July 1, 1869, the society met on the tenth at the office of Dr. Case in Preston, and was called to order by the President, when the following business ensued:

Applications for membership were presented to the president and several new members were admitted into the society.

Dr. Eighmy, Secretary, tendered his resignation, which was accepted, when Dr. Murray (Morrey?) was elected secretary by unanimous vote.

Dr. Wilson, President, appointed the following Board of Censors for the ensuing year: Drs. Thomas, Case and Eighmy.

Dr. Eighmy was elected Treasurer.

Dr. Case moved that an article of the *Chicago Eclectic Medical Journal* entitled "The action of mercury on the biliary apparatus" be read before the society. Dr. Murray was appointed to read the same.

Important and interesting topics were introduced relative to the history of reformed practice of medicine, compared with that of the "regular" heroic paracelsus, or allopathic practice, of which several members participated in discussion.

Dr. Wilson requested that the secretary forward copies of the proceedings to the county newspapers and to the *Chicago Eclectic Medical Journal.*

On motion the society adjourned to meet August 10, 1869, at 10 o'clock, a.m.

J. W. EIGHMY

There will be a meeting of the Fillmore County Eclectic Medical Society in Preston, July 31st, 1869, at 10 o'clock, a.m. when a full attendance of the profession in good standing is requested. By order of the society.

DR. MURRAY, President

It will be noted that H. Wilson, of Carimona, in 1866 one of the founders of the Fillmore County Medical Society, upon organization of the county eclectic medical society in 1869, transferred his allegiance. On February 14, 1870, when Dr. H. Wilson was president, a meeting of the eclectic society was held in Preston at the office of Dr. John A. Ross. In that spring notices appeared in county newspapers announcing the annual meeting of the Minnesota State Eclectic Medical Society in Owatonna on May 25. In July the Fillmore County Eclectic Medical Society met at the office of Drs. Case and Ross in Preston; all "professional brethren in good standing" were cordially invited to attend. There was promise that "notes on general practice, and so forth," would be read and that everything would be done to make the occasion profitable as well as pleasant. Dr. Case then was president and Dr. Ross secretary. By October Dr. Case was in Chatfield and the fall meeting was held in the office of Drs. Thomas and Case in that village. The last announcement observed was that of June 14, 1872, of the fifth annual meeting of the Fillmore Eclectic Medical Society at the office of Dr. Case, in Preston, on June 20, for the purpose of electing officers and the transaction of such other business as might be brought before the society. According to the *History of Fillmore County*, of 1882, this medical group disbanded in 1876. Subsequently some of its members became members of the Fillmore County Medical Society and of the Minnesota State Medical Society.

Public Health and Public Welfare

The employment of the supreme power of the state and nation for contending with the greatest of all human enemies, disease of body and mind, is a very modern practice. The

care of the sick was formerly wholly the duty of the family and the neighborhood, under the counsel of physicians, who looked upon their patients—the word originally meant "sufferers"—as private clients. The earliest example of extra-home care was, no doubt, the relief and maintenance of the sick poor, always by local agents. The abating of nuisances injurious to health and comfort easily followed, and then quarantine against smallpox and other contagious disease. The Minnesota Code of 1851 authorized justices of the peace, village trustees, and city councils to exercise these functions. The General Statutes of 1866 made town supervisors local boards of health. The recognition of health as a matter of public concern, and of the authority of the state to prevent disease and promote general health was made by the legislature of 1872 upon the initiation of Charles Nathaniel Hewitt, M.D.

Folwell: A History of Minnesota, 1926, vol. iv, page 413

In Fillmore County matters of public health and public welfare, including those mentioned by Folwell in the foregoing excerpt, have been from the first the concern of the county, the provisions of the law being carried out by the local boards and officers. A prefatory condensation will serve to list the offices maintained, a few of which will be considered further: A coroner has functioned in the county since 1856, although not until 1870 was record made of deaths and not until 1887 were full accounts kept. Records of naturalization, of intent and final, began in 1858, as did records of marriage. In the early years the poor, the sick and the handicapped received care from the overseers of the poor; in 1864 the overseer was calld the "poor master" and received $100 a year; in 1867 a poor farm was established. In that year also began official records of the insane, inebriate and feeble-minded. In 1870, in response to the law of 1869 creating a state bureau of statistics, were initiated detailed records of births.

The first coroner in Fillmore County and his immediate successor were laymen, as was usual in the early fifties; it was not until a few years later that the office became the accepted province of physicians. R. M. Foster served from October 8, 1856, to May 26, 1862, and W. D. Lipe held the office for the next two years. Since 1864 the coroner has been a physician, beginning with John W. Crees, who served from 1864 to 1865. Some of his successors served a few months, a year, a few years or several years, depending on the condition of their lives, inasmuch as in those decades there were many changes and removals. In chronological order the incumbents with their terms were: J. M. Wheat, 1865 to 1868; O. A. Case, 1868 to 1870; R. L. Moore, 1870 to 1872; J. G. Be(e)mis, 1872 to 1873; H. C. Grover, 1873 to 1880; J. H. Phillips, 1880 to 1887; H. H. Haskins, 1887 to 1889; H. Jones, 1889 to 1891; H. C. Grover, 1891 to 1892; J. H. Phillips, 1892 to 1895; A. W. Powers, 1895 to 1899; and F. A. Gowdy, 1899 to 1901.

In the early narratives of the county, and increasingly for several decades, there was reference to the attendance of physicians on paupers, who after 1867 were housed at the poor farm. In the *Preston Republican* of February 6, 1870, an official county newspaper, was the following item concerning certain little inmates of the poorhouse: "To the humane: Three likely infant boys, 2 mos., 3 mos., 13 mos. 2 without relations, for adoption. C. F. Holmes, Chairman, Board of County Commissioners." After 1866 there was occasional mention of the insane and their removal for institutional care at St. Peter, and in the seventies occasional reference to the inebriate and the feeble-minded. In 1883 there began in the county the official registration of physicians; in 1887 the recording of delinquent, dependent and neglected children.

Long before there was legislative movement to separate medical sheep from medical goats, action was taken in the interest of public welfare. It was realized early by physicians that misapprehension among the laity as to the care of premises required correction. In Fillmore County, beginning in 1857, notices in the news-

papers gave evidence of the action of town boards and health officers in townships and villages in abating nuisances of filth, promoting sanitation and, as far as physicians' knowledge went, in protecting citizens from disease. Village boards of health were warning owners of grocery, stable, privy, sty or barnyard that they "must not allow any nauseous or unwholesome substances to accumulate," that the marshal might remove if the owner refused to abate such nuisances, and that fine for infringement would be $50.00; and that no carcass or offal from slaughtering was to be deposited on any land within the limits of the village. The idea of the average person, then and for more than twenty years afterward, was that causes of disease were local and personal and that by no means should the individual citizen be subject to public supervision and enforcement of sanitary measures.

In the same early period, conduct during illness also required correction and began to receive it. As Folwell said, "It was an ancient American assumption that every citizen had the right to decide for himself and for his dependents whether he or they were sick or well and, if they were thought to be sick, to employ as physician, any persons, without regard to special education for the healing art."

Fillmore County was fortunate even in the earliest years in having among its medical practitioners a group of capable and intelligent physicians well dispersed in the region who gave attention to the control of communicable disease. As various writers on the history of medicine in Minnesota have related, there were from time to time in the fifties a few cases of Asiatic cholera, a disease that was brought in by afflicted persons who came into the state on Mississippi River boats and that consequently occasioned greatest uneasiness in the counties that bordered on or were near the river. Early in September, 1866, the *Rochester Republican* cited the *Winona Republican* as having stated on September 4 that within the last four or five days some fifteen cases of genuine Asiatic cholera had occurred in the town of Rushford, Fillmore County, in five of which death had resulted. The disease supposedly had been brought in by a party of newly arrived Norwegian immigrants, who were the chief sufferers; only one of the resident "American" families had been attacked. "This unpleasant news suggests the propriety of the board of health in towns on public thoroughfares looking vigilantly to the protection of public health." There were from time of the earliest settlement of Fillmore County, sporadic outbreaks of scarlet fever, chickenpox, smallpox, measles and diphtheria. In 1858 there appeared in the *Chatfield Democrat* a notice typical of many items in papers throughout the county: "We have heard of several cases of smallpox within a few miles of our village recently, however we believe none have proved fatal. Vaccination is the only remedy for the disease. Dr. Potter, of Mantorville (Dodge County) has an excellent article of vaccine virus, and gives particular attention to all wishing to make themselves immune against this terrible malady." In the sixties, under conditions of increasing population, because of rising birth rate but particularly because of continuing settlement by immigration, there was an alarming increase in the incidence of communicable disease, with outbreaks of epidemic proportions from time to time. Whooping cough, scarlet fever and measles (and pneumonia), as one early physician of the county said, were seasonal in the spring; typhoid fever came as regularly as the autumn; and diphtheria and smallpox were to be feared at all times. In reminiscent and recorded accounts of the medical practitioners of the period in Fillmore County there are recurring references to these diseases and their ravages and to methods of treatment of patients.

(To be continued in August issue.)

President's Letter

ONE of the matters which caused the greatest controversy at the last meeting of the Association was the Emergency Maternity and Infant Care Program and its Minnesota list of consultants and specialists, popularly referred to as the *Blue Book*. It may be helpful to define the issues presented and to clarify some of the controversial points.

What are the facts regarding the issuance and distribution of the *Blue Book?* Children's Bureau Information Circular No. 1 stipulates that specialists who are certified by specialty boards, or physicians whose training and experience make them eligible for examination by such boards should be designated as consultants. For areas where consultants as described are not available, the State advisory committee should recommend a plan for providing consultation to patients. Furthermore, this circular stipulated that lists of physicians approved as consultants should be made available to all physicians participating in the program.

In an attempt to reconcile these Federal regulations with Minnesota medical practices, a recommendation as follows was submitted to the Children's Bureau: "Consultants shall include specialists certified by their respective specialty board, physicains whose training and experience meet requirements for specialty board examination, and also those physicians licensed in Minnesota to whom the patient is referred by the original attending physician." Three separate times this proposal was submitted to and rejected by the Children's Bureau. Finally, approval of the Children's Bureau was given to a plan of the State advisory committee to include as consultants: (1) diplomates of specialty boards or those eligible for examination, (2) physicians with University teaching appointments, (3) members of specialty organizations, (4) physicians with one year of specialty graduate training, and (5) other local physicians, under certain conditions.

At the meeting, four major controversial points were discussed. First, there was a great deal of confusion about the word "specialist." No distinction was made between specialist and consultant. Physicians participating in the program are of three categories, namely: physicians licensed by the Minnesota State Board of Medical Examiners, physicians qualified as described above as consultants, and physicians participating as specialists. The only difference between specialists and other physicians is in the size of the fee which is 50 per cent higher for specialists. Second, many believed the EMIC program requires that specialists perform almost all types of services. Actually, the program does not require that any service be rendered by specialists. Restrictions relating to general practitioners involve only consultation, major non-obstetric surgery, and care of the newborn during the first two weeks when the infant is referred by an obstetrician not providing such care. These services must be given by consultants if the physician is to be paid. Third, it was not clear that many qualified consultants are located in rural areas. Beyond this, however, was the lack of knowledge of the fifth criterion which states, "In those locations, and at those times when consultants as designated are not available within one hour of travel time, other local physicians may serve as consultants and receive a fee accordingly." And finally, there was misunderstanding concerning circularization of the directory. The State Board of Health, based on an understanding with the Association, supplies the book only to physicians licensed in Minnesota, and this policy has been strictly followed.

It is sincerely hoped that this information clarifies some of the misunderstanding. Already the case load in the program for the first four months of this year shows a 20 per cent decrease over similar months of last year. Might it not be best, for the short remaining life of the program, to accept humiliation and regimentation in order to see the work well done to the end?

President, Minnesota State Medical Association

Editorial

CARL B. DRAKE, M.D., *Editor;* GEORGE EARL, M.D., HENRY L. ULRICH, M.D., *Associate Editors*

MINNEAPOLIS REGIONAL CHAPTER—AMERICAN COLLEGE OF PHYSICIANS AND SURGEONS

BEGINNING with a nucleus consisting of a few members of the medical staff of St. Barnabas Hospital in Minneapolis, who felt there was need of another organization within the Minnesota State Medical Association and the American Medical Association to assert the rights of general practitioners, the Minneapolis Regional Chapter of the American College of Physicians and Surgeons has been launched. Non-specialists from the staffs of nine other private hospitals in Minneapolis were added to those of St. Barnabas Hospital and an organization meeting was held May 17, 1946, at which the following officers were elected: President, Claude C. Kennedy; President-elect, Edgar W. Bedford; First Vice President, C. W. del Plaine; Second Vice President, George Fredericks; Secretary-Treasurer, O. A. Lenz; Board Members, H. D. Diessner and Frank Mach. The Minneapolis Regional Chapter, which includes Hennepin, Anoka, Carver, Wright, Sherburne, and Scott counties, offers to furnish to other eligible doctors in Minnesota, information which will enable them to establish similar regional chapters.

Articles of incorporation of the established chapter provide:

> The general purpose of this corporation is to provide an organization for the maintenance and betterment of service to patients and for the betterment of the scientific, economic and social standing of its members among their colleagues and patients. To that end, the corporation shall operate upon the premises (1) that all duly licensed physicians and surgeons are professionally honest until proved otherwise, are scientifically equipped to undertake the practice in which they are engaged, and have equal rights, privileges and responsibilities in the practice of their profession, (2) that no special interest group shall have the right to control or hamper the practice of any duly licensed physician or surgeon according to his judgment or to dictate or influence the treatment or the disposal of his patients or to deny him or his patients access upon an equal basis to physical facilities necessary or convenient to his practice and the treatment of his patients, and (3) that no political group by political means shall control the economic, social or scientific status of any duly licensed physician or surgeon.
>
> For the realization of the foregoing aims, ideals and objectives, this corporation may unite with similar corporations from other regions to form a Minnesota College of Physicians and Surgeons and to form an American College of Physicians and Surgeons.

As far as we can judge, the movement is a result of a feeling in certain quarters that general practitioners or those not certified by specialty boards are being discriminated against, that their activities in private hospitals are unjustifiably over-regulated, that they do not have equal opportunity for having their patients admitted to hospitals. Doubtless, the dearth of hospital beds has aggravated the picture. Another cause of discontent is the "Blue Book," a directory of consultants published by the Division of Hygiene, Minnesota State Department of Health, in connection with the Emergency Maternity and Infant Program. Objection is made that certain individuals are listed as available consultants, who should not be, and other names, which should be listed, are omitted. If the EMIC program ceases with the war's end, the matter loses importance. If not, it becomes of continued importance.*

If this discrimination is taking place and non-specialists are being obstructed in the practice of their profession, they have cause for grievance. On the other hand, the statement which appears in the above Articles of Incorporation, that all duly licensed physicians and surgeons have equal rights and privileges and responsibilities in the practice of their profession, is not strictly correct. The recent medical school graduate who has received his state license to practice medicine is not scientifically trained nor morally entitled to perform certain surgical and other procedures. This has been recognized for some time, and hospital staffs have recognized their responsibility in regulating surgical procedures within their walls. This has stimulated the urge for special training and certification by national specialty boards.

It is perhaps trite to state that the possession of a certificate from a national board is not

*The reader is referred to the President's Letter in this issue.

prima facie evidence of ability or that lack of such certification indicates lack of ability. An arbitrary use of Board certification as a yardstick for hospital privileges is therefore a mistake. The medical staff of a hospital is in a position to know the ability of its members. The practice initiated in the Duluth hospitals, whereby inexperienced surgeons, for instance, are required to accept the assistance of more competent staff members for certain surgical procedures, seems a practical and happy solution in which co-operation and not antagonism rules.

It would seem that premise No. 2 in the above Articles of Incorporation maintains that no duly licensed physician or surgeon should be interfered with in the practice of his profession according to his own judgment. This would seem to be a declaration of opposition to regulation of hospital practice by hospital staffs. Until such time as certification by State Boards of Medical Examiners is altered to specify more specifically the field in which a licensed doctor is entitled to practice, it would seem that hospitals should continue to have some regulatory powers. Doubtless, such a change in the certification by State Boards of Medical Examiners would not be 100 per cent effective and would not relieve hospitals of their responsibility in this regard.

The formation of the American College of Physicians and Surgeons threatens to result in a division in the ranks of the medical profession which is to be deplored. We have always constituted a guild in which older members have been only too happy to assist younger and less experienced members in every way possible. It is to be hoped that any unjust treatment of nonspecialists by hospitals or specialists will be corrected in the interest of justice and harmony.

BENADRYL

BENADRYL is the name given to a drug synthesized and developed by the research laboratories of Parke, Davis and Company. It has been found to have antihistamine qualities to a marked degree and is relatively nontoxic.

A variety of clinical syndromes are due to the release of histamine in the tissues. Asthma may well be a manifestation of histamine action for histamine can produce a spasm of the bronchioles, an edema of their mucous membrane lining and an increase of mucus secretion from the mucous glands. The lesions of both acute and chronic urticaria, the cause of which is not known, can be reproduced by injections of histamine. The mucous membrane reactions of the respiratory tract present in hay fever and allergic rhinitis are likewise similar to histamine reactions.

Benadryl has been found to be of real clinical value in alleviating these conditions produced by histamine. It counteracts the vasodilatory action of histamine on the skin and mucous membranes. Although it has been shown to be fifteen to thirty times as effective as aminophyllin in relieving bronchial constriction, it has not proven very effective clinically in relieving asthma. Its sphere of real usefulness seems to be in the treatment of the symptoms of hay fever, vasomotor rhinitis and acute and chronic urticaria. According to one report, 69 per cent of hay fever sufferers have been markedly relieved and 90 per cent of those suffering from perennial vasomotor rhinitis. Similar satisfactory results have been reported in the treatment of urticaria.

Other properties of benadryl which may enhance its therapeutic value are its alleviation of smooth muscle spasm, its apparent reduction of stomach acidity and its relief of certain types of headache. Whether it will prove serviceable in the treatment of dysmenorrhea, peptic ulcer and the control of migraine remains to be seen.

Benadryl is a white crystalline powder, soluble in water and alcohol and is marketed in 50 mg. capsules and in an elixir, 10 mg. to the dram. Unfortunately, the supply of the capsules is limited. Intramuscular injection is quite irritating, while it can be given intravenously in 10 to 60 mg. doses in 100 c.c. of physiologic saline at a rate of 120 drops per minute.

The dosage of benadryl varies according to the individual. Some individuals may require twice the usual dose of 50 mg. three times a day. While it is effective in a high percentage of cases, it does produce the undesirable side-effects of drowsiness, dizziness and nervousness in a considerable number of individuals sufficient to contraindicate its use.

It would seem, however, from the reports that have appeared during the past year that benadryl promises to be a real addition to our armamentarium and that its field of usefulness may well be expanded beyond the symptomatic treatment of hay fever and urticaria.

THE THERAPEUTIC TRIALS COMMITTEE

THE Therapeutic Trials Committee is a new standing committee recently appointed by the Council on Pharmacy and Chemistry of the American Medical Association to encourage and aid sound research on medicinal agents for the preventive treatment or diagnosis of disease. The new committee of twelve includes those members not on the Council in addition to four ex officio members and employs a full-time secretary.

The Committee will initiate investigations of new products which in their opinion merit consideration, and will welcome suggestions. It will serve as a center for co-ordinating research and chemical trials to avoid duplication of effort. It may arrange conferences on therapeutic problems for exchange of information and ideas and in assisting clinical investigations. Before a product shall be subject to clinical trial, information must be available as to the nature, pharmacologic actions and toxic effects of the product. The Committee will then aid in securing co-operation between investigators and testing agencies such as hospitals.

This new Therapeutic Trials Committee will present a mechanism whereby new medicinal and biological remedies can be tried out and promptly evaluated. The profession not infrequently has its attention called by lay articles to new therapeutic remedies. Patients inquire about their value. Perhaps, as in the case of Anthallan, only one article has appeared on the subject in medical literature. It will be some time before such a product will have been sufficiently used to warrant its inclusion in New and Non-Official Remedies. In the meantime the physician would welcome reliable information as to its merits. This new committee should serve to expedite the evaluation of new remedies, and its establishment is to be highly commended.

OLIN WEST, PRESIDENT-ELECT AMA

Dr. Olin West, who resigned as Secretary of the American Medical Association April 1, 1946, following twenty-four years of service in that office, was elected to the office of Presidene-Elect at the recent annual meeting held in San Francisco. Dr. West will take office as President in 1947, succeeding Dr. H. H. Shoulders of Nashville, Tennessee, who assumed his duties as President this year.

DOCTOR OLIN WEST

To those who have had the privilege of knowing Dr. Olin West, for many years the Secretary and General Manager of the American Medical Association, his retirement on April 1, 1946, was a source of regret. He is a polished Southern gentleman and has always stood for the highest principles in Medicine in the strenuous years of service he gave to the national organization. It is with pleasure, therefore, that we reproduce the resolution passed by the House of Delegates of the Minnesota State Medical Association at the May, 1946, meeting and the reply received from Doctor West.

A Resolution

WHEREAS the Council and House of Delegates of the Minnesota State Medical Association are highly cognizant of the many years of loyal, energetic, effective and meritorious service rendered by Dr. Olin West on behalf of organized medicine, and

WHEREAS members of the Minnesota State Medical Association acknowledge with deep regret his resignation as Secretary and General Manager of the American Medical Association effective April first, leaving behind a record of more than twenty-three years of outstanding achievement, now be it, therefore

RESOLVED that a warm expression of appreciation for his unselfish and devoted service be conveyed to Dr. West on behalf of the medical profession of Minnesota, and be it further

RESOLVED that an Honorary Membership in the Minnesota State Medical Association be conferred upon Dr. West in recognition of his distinguished service in the field of scientific medicine, organized medicine and public health, and be it further

RESOLVED that the Secretary of the Minnesota State Medical Association be hereby instructed to transmit this commendatory resolution to Dr. West.

St. Paul, Minnesota
May 20, 1946.

June 10, 1946

R. R. Rosell, Secretary
Minnesota State Medical Association
My dear Mr. Rosell:

Your letter of June 7 and the enclosed copy of the resolution adopted by the House of Delegates of the Minnesota State Medical Association came to hand today.

I am deeply touched by the action of the House of Delegates and humbly but gratefully appreciate the signal honor conferred on me by my election to Honorary Membership in the Minnesota State Medical Association.

It has been a high privilege to be associated with the fine body of physicians throughout the United States who have given devoted service in the common effort "to promote the art and the science of medicine and the betterment of the public health." Among those who have served as members of official bodies of the Americana Medical Association and in other capacities there has been a goodly number of members of the Minnesota State Medical Association. They have served with distinction in promoting a great cause in their own state and in the Nation.

Please convey to the House of Delegates an expression of my grateful appreciation of the honor conferred on me which will grow and deepen through the years that may be left to me.

With heartfelt good wishes for the Minnesota State Medical Association and for its capable secretary, I am

Sincerely yours,

OLIN WEST

535 North Dearborn Street
Chicago 10, Illinois

MEDICAL ECONOMICS

Edited by the Committee on Medical Economics
of the
Minnesota State Medical Association
George Earl, M.D., Chairman

STATE PHYSICIANS MUST CONTINUE TOLERANCE OF EMIC PROGRAM

The frequency and heat of the discussions of the EMIC program in Minnesota carried on at the various meetings and in hotel lobbies during the 1946 annual meeting would indicate that state physicians are vitally interested in the future of the program and critical of its operation.

Most condemned was the feature of the program known as the *Blue Book*, which lists consultants and specialists available for consultation by physicians attending cases eligible for benefits under the program.

A special meeting was held Sunday morning just previous to the annual meeting at which a careful study of all the facts bearing on the Emergency Maternal and Infant Care program in Minnesota was made by members of the Resolutions Committee, the Reference Committee on Miscellaneous Scientific Reports and the Medical Advisory Committee to the State Department of Health on the EMIC Program.

A report has been made by this committee of the findings, and this has been sent to the member doctors of the Minnesota State Medical Association.

Recommend Keeping Blue Book

Dislocation of the entire EMIC program would result with the discarding of the *Blue Book*, the study committee has concluded. The committee realizes that inequities exist; and while the present setup is not thoroughly satisfactory to anybody in the profession concerned, it is the best that can be arranged under the circumstances.

It is evident that the crux of the whole question is the inability of the attending physician to exercise his own choice of physician for consultation. This is the sore spot behind all of the opposition to the *Blue Book*.

When the EMIC program was set up, it was recognized that there would be certain inequalities and at that time the Medical Advisory Committee stated that it would deal with these as they occurred in an effort to correct them as quickly as possible. Ever since that time, the committee has held to that policy and three times has approached the Children's Bureau in Washington in an attempt to eliminate undesirable features. On each occasion its recommendations were turned down.

Before making any recommendations on the EMIC program, the members of the three committees studying the problem gave careful attention to the history and background of the whole program.

The law creating EMIC, passed March 18, 1943, and later signed by the President, set up the program for the duration of the emergency plus six months. Thus, the program is self-terminating and due to expire some time in the future.

Board of Health Co-operates With Doctors

In carrying out the EMIC program in this state, the Minnesota State Board of Health has consistently followed the policy of asking the Minnesota State Medical Association for recommendations before they have written anything into the state plan or adopted it themselves. The Board has even refused to discuss policies with authorities in Washington until the sanction of the State Association has been obtained. This was done because it was felt that the men who were going to do the work had every right to say how the program was to be set up.

At the outset of the program, in 1943, the State Board of Health went to the State Medical Association at its annual convention in Minneapolis and asked for comments relative to its op-

eration in Minnesota. The Council at that time appointed a committee to study the matter. Recommendations were drafted by this committee which were approved by both the Council and the House of Delegates and turned over to the State Board of Health as a basis for putting the EMIC program into operation.

Ask Broad Definition of "Specialists"

With respect to consultation service, those first recommendations stated that consultants should be specialists who are certified by their respective American Boards *or those physicians whose training and experience meets the requirements of such boards* and that these physicians should be called in by the attending physician. In other words, it specified the diplomate because the federal regulations specifically designated them.

It also included any physician licensed in Minnesota who was called in by the attending physician. It left the choice of consultant with the attending doctor. This was approved by the Council and House of Delegates as stated, then turned over to the State Board of Health which submitted it to Washington, where it was refused.

In the meantime, the Federal Government approved *only diplomates* for consultant service and all during that period it was possible, therefore, to pay only diplomates. From this source has sprung most of the difficulty and controversy with respect to the operation of the program and the feeling that it is too strongly weighted to favor specialists to the extent that it has been labeled a "specialists' program."

Program Has Strong Patriotic Appeal

The study committee has pointed out that when the EMIC program first began to function, the demand for such a program created by its patriotic appeal, made it impossible for any medical association or health agency to refuse to co-operate on the basis of what would be looked upon by program-backers as mere inequities.

The adamant attitude of the federal government has put the health agencies on the spot—where they have had to do things they would not ordinarily do.

The point has also been raised that while the American Medical Association has representatives on the Advisory Committee of the Children's Bureau, it has at no time, officially as an organization, had the program submitted to it for comment or approval.

In its refusal to consent to abolising the Blue Book, the committee calls attention to several factors. If the *Blue Book*, or the consultants' service, were abandoned, the EMIC program would no longer be able to provide consultation services upon request of the attending physician nor would the EMIC program in Minnesota be able to provide non-obstetrical major surgery, although it would still be able to provide ordinary care.

Both Patient and Doctor Would Lose

If such special services could not be provided under the EMIC program it would mean that patients could not get full benefits and doctors would not get paid. The result of this, it can easily be seen, would be dissatisfaction on both sides, particularly on the part of the public which would not understand why the special services are not obtainable.

If the program is thus crippled because of lack of standards under which it can operate, what would be the final outcome as far as the physicians of Minnesota are concerned? Would a physician be enthusiastic about accepting cases under this program knowing that if complications should arise there would be no provision for consultant service?

Those charged with the responsibility of administering the program are far from satisfied with the present methods of operation in respect to the matter of the denial of free choice of physician for consultation, the committee has pointed out.

They are well aware of the justifiable complaints that have arisen in cases where a physician has been denied his fees and where a patient has got the impression that his doctor was not qualified to render proper medical service.

Errors on Both Sides

It must be kept in mind, however, that as in all large programs, errors will creep in and that they have been made on both sides—there are some physicians that have been designated as consultants who should not be so designated, just as there are others who should be, who have been overlooked.

Since the EMIC program is self-limiting and since the rapid demobilization of military forces will cause the program to decline steadily, the flaws in the program will in the near future disappear when the program itself is dissolved.

For these reasons, the doctors who studied the program are recommending that the profession forbear. It is the intent of the Advisory Committee and the Administrative Agency to keep hammering away in an attempt to get concessions that will permit the state plan to fit conditions in the state, fully recognizing the dangers inherent in the federalization of medical practice that causes local agencies to lose their sovereignty.

It should be evident to everyone that the program in Minnesota is functioning under limitations and handicaps set up by directives from Washington, and that the physicians are working under most difficult situations in an effort to meet the demand on the part of the public for this service.

OPTHALMOLOGY COMMITTEE FAVORS CREATION OF MINNESOTA "EYE BANK"

Minnesota may one day have a center for study and research on the corneal graft operation and perhaps for storing corneal tissue. Such was the anticipation of the State Committee on Ophthalmology in its annual report to the House of Delegates.

The report stated that during the past year there has been much publicity on the corneal graft operation, especially since the establishment in New York of "The Eye Bank for Sight Restoration, Incorporated."

This Eye Bank recently announced a new branch at Chicago with headquarters at Cook County Hospital, and it was the opinion of the committee that the Minnesota State Medical Association would do well to keep in step with this expansion and survey the existing situation in Minnesota, bearing in mind the possibility of establishing a clearing house or branch bank in this state at some future time.

The committee reported that the corneal graft operation has been performed in Minnesota by several well-known ophthalmologists in about twenty cases, with good takes—and ultimate good vision in about 35 per cent of the cases. The donor material was all taken from freshly enucleated eyes. While at present, the comparatively few cases performed in Minnesota do not call for more than the amount of fresh donor material available at any one time, the committee is looking ahead to the time when Minnesota by the establishment of a branch or clearing house at some centrally-located point, such as the University of Minnesota Hospitals, could teach the corneal graft operation and conduct research so that this state could contribute to the advancement of knowledge in this field.

SURVEY ON CHILD HEALTH SERVICES SOON TO GET UNDER WAY IN STATE

To formally introduce the citizens of Minnesota to the survey on child health services in the state which is soon to get under way, Dr. Roland E. Nutting, Duluth, state chairman of the Academy of Pediatrics, and Dr. Roger L. J. Kennedy, Rochester, chairman of the State Committee on Child Health, appeared on a radio broadcast at the time of the annual meeting with a summary of the work done on the project to date and information relative to the need and purpose of such a survey.

The House of Delegates has approved the plan for the review of child health facilities in this state and has voted to co-operate in every way possible with the American Academy of Pediatrics, which is supervising the individual state surveys seeking to determine hospital facilities available, community health services, both public and private, distribution and quality of professional personnel and pediatric education in state medical schools throughout the nation.

The State Board of Health has already allocated funds available under the federal social security act for the survey and Dr. Viktor O. Wilson, director of child hygiene, has accepted an invitation to direct the work of the survey.

The reason for the study arose from the realization that systematic planning by physicians themselves is necessary to provide adequate care for children who need it. The report will be used to evolve a program providing adequate pediatric care without resorting to "socialized" medicine.

Minnesota doctors will be hearing more about this survey as final plans take shape and the actual work of gathering the data is begun.

MINNESOTA STATE BOARD OF MEDICAL EXAMINERS

230 Lowry Medical Arts Bldg., Saint Paul, Minnesota

Julian F. DuBois, M.D., Secretary

Pontiac, Michigan, Woman Forfeits $250 Bail in Duluth Basic Science Case

Re State of Minnesota vs. Mary Rakestraw

On May 6, 1946, Mary Rakestraw, thirty-six years of age, 703 Community National Bank Bldg., Pontiac, Michigan, forfeited bail in the sum of $250 when her case was called for trial in the District Court of St. Louis County at Duluth, Minnesota. The defendant was arrested at Duluth on October 1, 1945, and charged with practicing healing without a basic science certificate after she had inserted the following advertisement in the Duluth daily paper:

CROSS-EYES

Straightened—usually one office visit—safely, permanently; No cutting of muscles or cords.

Personal Interviews Will Be Held from 10 A.M. to 7 P.M.

HOTEL DULUTH—MONDAY, OCTOBER 1, 1945 DULUTH, MINN.

Come in and discuss your case. Complete information regarding methods, fees, etc. Illustrated literature free. No charge for interview.

MARY RAKESTRAW LEAGUE FOR CROSS-EYE CORRECTION

703 Community National Bank Bldg. Pontiac, Mich.

The defendant admitted that she has no basic science certificate in the State of Minnesota, nor did she have a license to practice medicine in any state. It was pointed out to the defendant that she had no lawful right to interview or examine persons who were afflicted with any ailment, nor to give them advice. The defendant stated that she was receiving $6,000 per year for her services and that some of the persons with cross-eyes interviewed by her, were referred to an osteopath by the name of L. K. Mathews at Pontiac, Michigan, for operation. Following the defendant's arrest, she demanded a preliminary hearing which was held on October 31, before Judge Richard M. Funck of the Duluth Municipal Court. A witness for the State testified that he had consulted with the defendant in reference to his cross-eyes and that upon the recommendation of Mrs. Rakestraw, he went to Pontiac, Michigan, where he was operated on by Mathews. The witness testified that he paid Mathews $200 for the operation. The witness also complained that he was still cross-eyed after the operation. Following the testimony at the preliminary hearing, Judge Funck expressed the opinion that the defendant's activities were in violation of the laws of Minnesota and ordered the defendant held for trial in the District Court, bail being fixed in the sum of $1,000 cash, which was furnished.

When the case was called at the November term of Court, it was passed until the January, 1946, term because one of the attorneys for the defendant was engaged in business oustide of the State. The matter was again continued because of the illness of the defendant, and, meanwhile, an application was made by the defendant to have her bail reduced. With the approval of the County Attorney and legal counsel for the Minnesota State Board of Medical Examiners, the bail was fixed in the sum of $250, which the defendant forfeited by her nonappearance when the case was called for trial on May 6. The Court also ordered a writ of attachment to issue for the defendant. Legal counsel for the defendant stated that she would not again attempt to carry on her activities in the State of Minnesota.

Saint Paul Abortionist Sentenced to Eight-Year Prison Term

Re State of Minnesota vs. Arthur N. Alexander
Re State of Minnesota vs. Joseph Schmolke

On June 3, 1946, Arthur N. Alexander, fifty-four years of age, 78 North Smith Avenue, Saint Paul, Minnesota, was sentenced by the Hon. Albin S. Pearson, Judge of the District Court of Ramesy County, to a term of not less than two, nor more than eight years at hard labor in the State Prison at Stillwater. The sentence followed Alexander's plea of guilty to an indictment by the grand jury of Ramsey County charging him with the crime of abortion performed April 2, 1946, on a twenty-seven-year-old married Saint Paul woman. On the same day, Judge Pearson sentenced the defendant, Joseph Schmolke, fifty-two years of age, 78 No. Smith Avenue, Saint Paul, Minnesota, to a term of not to exceed four years in the State Prison at Stillwater, following Schmolke's plea of guilty to an indictment charging him with the crime of abortion in the same case. Judge Pearson upon the recommendation of the County Attorney of Ramsey County stayed Schmolke's sentence and placed him on probation for four years, but ordered Alexander taken to the State Prison to serve his sentence. Alexander's sentence is double the statutory sentence for abortion due to the fact that Alexander, in December, 1939, was convicted in the District Court of Hennepin County, of the crime of abortion.

Alexander and Schmolke were arrested on May 11, 1946, by Saint Paul police officers following the death earlier the same day, in a Minneapolis hospital, of an eighteen-year-old, unmarried Minneapolis girl upon whom, it is alleged, a criminal abortion had been performed. Evidence was obtained that the girl was taken to Alexander for an abortion on May 6, and that Alexander was paid $100 for his services. The grand jury of Ramsey County indicted Alexander on May 13, 1946, for manslaughter in the first degree in connection with the death of the Minneapolis girl. At the same time the grand jury indicted Alexander and Schmolke in a joint indictment for doing an abortion on the Saint Paul woman. In view of the fact that Alexander had a previous conviction for a felony, he was permitted to plead guilty to the abortion indictment instead of the manslaughter indictment, receiving a double sentence. On motion of the County Attorney, Judge Pearson ordered the manslaughter indictment held in abeyance upon the condition that after Alexander has served his prison sentence, he is to reside permanently outside of Ramsey and Hennepin Counties. If Alexander fails to comply with this condition, the State will be permitted to re-instate the manslaughter indictment upon the calendar for trial. Alexander was formerly licensed to practice chiropody in the State of Minnesota, but had his license revoked in 1935, when he was convicted of practicing healing without a basic science certificate. In December, 1939, Alexander was sentenced to serve two years in the State Prison at Stillwater following his conviction in the District Court of Hennepin County of the crime of abortion. Schmolke stated to the Court that he formerly lived at Saint Cloud and did common labor.

The prompt arrest of Alexander and Schmolke resulted from the splendid co-operation of the Police Departments of Minneapolis and Saint Paul, both defendants being in jail within eight hours after the death of the Minneapolis girl. Notwithstanding the fact that the death occurred on a Saturday, evidence was obtained over the week end that enabled Mr. James F.

Lynch, County Attorney of Ramsey County, to present the case Monday morning, May 13, to the grand jury for an indictment. Judge Pearson set bail in Alexander's case at $11,000 and at $5,000 for Schmolke, resulting in both defendants' remaining in custody until their pleas of guilty were entered.

Minneapolis Court Issues Warrant for Arrest of "Internationally Known Health Lecturer"

Re State of Minnesota vs. Leon Antony Sceblo, alias Dr. Leonid De Seblo

On June 8, 1946, a complaint was filed in the Municipal Court of Minneapolis charging Leon Antony Sceblo, alias Dr. Leonid De Seblo, who gave his home address as 317 South Bonnie Brae, Los Angeles, California, with practicing healing in violation of the Minnesota Basic Science Law. A warrant was issued for the arrest of the defendant and is in the hands of the Minneapolis Police Department for service.

De Seblo registered at a Minneapolis hotel on March 29, 1946, and stated that he came to Minneapolis from Milwaukee, Wisconsin, and previous to that had been in Omaha, Nebraska. On April 6, 1946, postal cards were mailed out from Minneapolis representing De Seblo as being a doctor and an authority on "craniopathy, endocrine glands, old age, diet and nutrition, cosmic rays," et cetera. The postal card also represented that the defendant was an authority on the pituitary, pineal and thalmic glands and was able to advise the public on

> "how to avoid Insanity, Inferiority Complex, Subnormal Mental States, Nervous Ailments, Eye Troubles, Rheumatism, High Blood Pressure, Heart, Skin and all other mental and physical disorders."

The postal cards also announced that De Seblo would give two lectures April 11 and 12 in Minneapolis. Representatives of the Minnesota State Board of Medical Examiners and the Minneapolis Police Department were present at De Seblo's lecture on April 12, during which lecture, De Seblo discussed vitamins, craniopathy, cosmic ray and other matters. He also announced that he would conduct a health course lasting three days and the cost would be $25.00 per individual. At the conclusion of the lecture he was instructed to report to headquarters of the Minneapolis Police Department the following morning at 9 o'clock. He failed to make his appearance and subsequent investigation disclosed that he checked out of the hotel at about 7 A.M., April 13. De Seblo also admitted that he had no license to practice any form of healing and that he had never obtained a degree in medicine nor any other legally recognized branch of the healing arts.

* * *

Minneapolis Orderly Pleads Guilty to Violating Basic Science Law

Re State of Minnesota vs. Frank Herman Gold

On June 12, 1946, Frank Herman Gold, twenty-nine years of age, 4148 Elliot Avenue South, Minneapolis, was sentenced by the Hon. Lars O. Rue, Judge of the District Court of Hennepin County, to a one-year term in the Minneapolis Workhouse, following Gold's plea of guilty on May 21, 1946, to an information charging him with the crime of practicing healing without a basic science certificate. Judge Rue stayed the sentence and placed the defendant on probation for one year on condition that Gold absolutely refrain from practicing healing in any manner in the State of Minnesota, and upon the further condition that he be not employed, in any capacity, by any hospital.

Gold was arrested on May 18, 1946, by Minneapolis police officers following an investigation that disclosed that Gold, who was employed as an orderly by a Minneapolis hospital, was representing himself as a physician and surgeon. Gold's activities came to the attention of the Minnesota State Board of Medical Examiners because of inquiries made by prospective patients in Minneapolis concerning Gold. Gold had also been under investigation by the Saint Paul Police Department because of representations made by Gold in Saint Paul that he was a doctor and on the teaching staff of the University of Minnesota. Gold admitted in Court that these representations were false, and upon being questioned by Judge Rue as to why he resorted to such falsehoods, explained to the Court that he was trying to "build" himself up and to be a "big shot." After being in jail for twenty-five days prior to being sentenced, Gold told Judge Rue that he had learned his lesson. Gold also stated to the Court that he was born in New York City, and prior to coming to Minneapolis had been employed as an orderly in a New York City hospital. Gold also admitted that he had attempted to change his name to "Gould" and had used that name at various places in Minneapolis.

CLINICAL-PATHOLOGICAL CONFERENCE

(Continued from Page 699)

18. Horwitz, A.: The present conception of so-called "chronic cystic mastitis." M. Ann. District of Columbia, 5:39-41, (Feb.) 1936.
19. Jung, F. T., and Shafton, A. L.: Mastitis, mazopalsia, mastalgia, and gynecomastia in normal adolescent males. Illinois M. J., 73:115-123, (Feb.) 1938.
20. Lewis, D., and Geschickter, C. F.: The relatoin of chronic cystic mastitis to carcinoma of the breast. Surg. Gynec. & Obst., 66:300-307, (Feb. 15) 1938.
21. Lewis, D., and Geschickter, C. F.: Ovarian hormones in relation to chronic cystic mastitis. Am. J. Surg., 24:280-304, (May) 1934.
22. Lewis, D., and Geschickter, C. F.: Endorcine therapy in chronic cystic mastitis. J.A.M.A., 109:1894-1900, (Dec. 4) 1937.
23. MacNeal, W. J.: Chronic cystic mastitis. S. Clin. North America, 12:523-525, (Apr.) 1932.
24. Mandy, T. E., and Mandy, A. J.: Use of testosterone propionate in gynecologic and obstetric disorders. West. J. Surg., 48:604-608, (Oct.) 1940.
25. Martin, S. J.: Diagnosis of tumors of the breast. S. Clin. North America, New York Number, 319-325, (Apr.) 1946.
26. Patey, D. H.: Chronic cystic mastitis and carcionma. Internat. Abstr. Surg., 68:575-579, (June) 1939.
27. Proctor, I. M., Carpenter, C. C., and Morehead, R. P.: The relation of chronic cystic mastitis to malignnacy. Surg., Gynec. & Obst., 70:671-678, (Mar.) 1940.
28. Rodman, J. S.: Chronic cystic mastitis. A further report on the nature of the process. Am. J. Surg., 28:452-460, (May) 1935.
29. Rodman, S. J., and Ingleby, H.: Chronic cystic mastitis. Preliminary report on nature of process. Arch. Surg., 20: 515-521, (Mar.) 1930.
30. Rodman, J. S., and Ingleby, H.: Plasma cell mastitis. Ann. Surg., 109:921-930, (June) 1939.
31. Rogers, H., and Nathanson, I. T.: Chronic cystic mastitis. Practical management in a cancer clinic. New England J. Med., 212-551-556, (Mar. 28) 1935.
32. Spence, A. W.: Testosterone propionate in chronic mastitis. Lancet, 2:820-823, (Oct. 14) 1939.
33. Taylor, H. C., Jr.: The relation of chronic mastitis to certain hormones of the ovary and pituitary and to coincident gynecological lesions I and II. Surg., Gynec. & Obst., 62: 129-148, (Feb.) 1936; 61:562-584, (Mar.) 1936.
34. Taylor, H. C., Jr.: The present status of gynecologic endocrine therapy. Bull. New York Acad. Med., 14:608-634, (Oct.) 1938.
35. Taylor, H. C., Jr.: The endocrine aspects of chronic mastitis. Surg. Gynec. & Obst., 74:326-342 (Feb. 16) 1942.
36. Warren, S.: The relation of "chronic mastitis" to carcinoma of the breast. Surg. Gynec. & Obst., 71:257-273, (Sept.) 1940.
37. Whitmore, E. R.: Fibro-epithelial tumors, chronic cystic mastitis and carcinoma of the breast. Virginia M. Monthly, 68:251-267, (May) 1941.

WOMAN'S AUXILIARY

Mrs. Edward V. Goltz, *President*
Saint Paul, Minnesota
Mrs. John K. Butler, *Editor*
Carlton, Minnesota

Executive Board

The annual meeting of the executive board of the State Medical Auxiliary was held on Monday, May 20, at the Minnesota Club. Mrs. E. V. Goetz, president, presided.

At the general meeting held on Tuesday, several problems were discussed and handled. Mrs. Melvin S. Henderson of Rochester assumed office as the new president. At the luncheon at the Lowry Hotel, Dr. George M. Curtis of Columbus, Ohio, was guest speaker. A style show was put on by Field Schlick and Company. Other state officers elected were: Mrs. J. A. Thabes, Brainerd, president-elect; Mrs. Harold Wahlquist, Minneapolis, Mrs. M. J. Gillespie, Duluth, Mrs. Mark E. Ryan, Saint Paul, and Mrs. E. J. Simon of Swanville, vice presidents; Mrs. George Penn of Mankato, treasurer; Mrs. H. W. Satterlee of Lewiston, recording secretary; and Mrs. R. N. Jones of St. Cloud, auditor.

Blue Earth

Blue Earth Auxiliary met at Point Pleasant, Madison Lake, May 27, with the Medical Society. Dr. Arthur B. Hunt from the Department of Obstetrics and Gynecology of the Mayo Clinic spoke on "Anesthesia and Analgesia in Obstetrics and the Rh Factor." The new officers are Mrs. Bradley Troost, Mrs. George Penn, Mrs. Walter B. Kaufman and Mrs. John C. Mickelson, all of Mankato.

Hennepin

Mrs. J. M. Neal was installed as president at the annual meeting, May 3, at the Woman's Club. Mrs. Frederick Schaaf is president-elect. Mrs. Cecil J. Watson and Mrs. F. S. McKinney were the chairmen in charge of the luncheon and hospitality.

Mrs. Daniel B. Mork writes of a small group within the auxiliary which has organized a speech club. They meet monthly and at a recent dinner meeting at the home of Mrs. Mork, Dr. Peter Schultz, husband of one of the members, entertained the group afterwards with his war experiences. Mrs. Joe Neal, the new president, was the honor guest. Such a group offers incentive to others to stimulate closer friendships among doctors and their wives.

Olmsted-Houston-Fillmore-Dodge

Mrs. M. S. Henderson of Rochester, new state president, was hostess to her County Auxiliary on May 1. Officers for next year will be Mrs. M. S. Merritt, Mrs. E. V. Allen, and Mrs. F. M. Feldman, all of Rochester.

Renville

The Medical Society and the Auxiliary met at the Olivia Sweet Shop on Tuesday, May 14, for dinner. Officers for 1946-47 are Mrs. Ralph Erickson, Hector, Mrs. J. Cosgriff, Olivia, and Mrs. P. Johnson, Bird Island.

Park Region

Mrs. P. Boysen reports the new officers of the Park Region Auxiliary to be Mrs. E. A. Herberg and Mrs. H. B. Thompson, both of Fergus Falls.

St. Louis

On May 7, Dr. Myron Weaver talked at an open meeting sponsored by the Auxiliary. Mrs. R. M. Mayne assisted Mrs. A. J. Bianco in making the arrangements. On May 14 at the annual meeting held at Northland Country Club, Mrs. Henry Bakkila was installed as president and Mrs. S. M. Litman was made president-elect. Mrs. G. A. Hedberg, retiring president, summarized the year's activities. The new officers will be Mrs. H. E. Bakkila, Mrs. Roy Pederson, Mrs. Ralph Eckman, Mrs. D. W. Wheeler, Mrs. T. O. Young and Mrs. John K. Butler.

Stearns-Benton

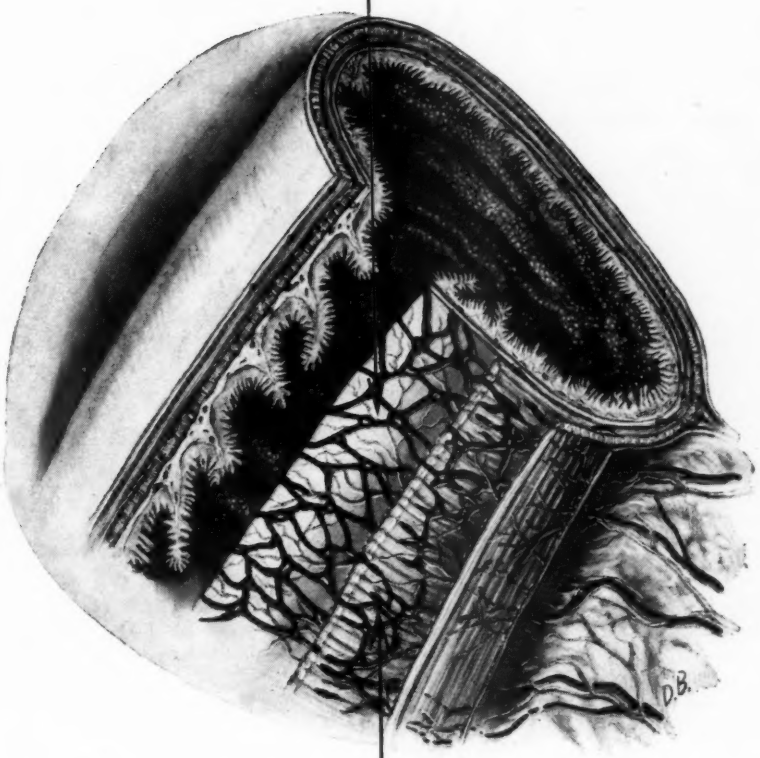
A Dutch treat dinner at Hays Hostess House on May 14 was the scene of the annual meeting of the Stearns-Benton Auxiliary. Officers are Mrs. S. J. Raetz, St. Cloud; Mrs. L. M. Evans, Sauk Rapids; Mrs. J. J. Gelz, St. Cloud, and Mrs. F. W. Hovorka, St. Cloud. Mrs. R. N. Jones is publicity chairman.

Washington

Mrs. F. G. Landeen of Stillwater was hostess on May 14 to the Washington County Auxiliary. The annual reports were given and the following elected to office: Mrs. F. A. Stevens, Lake Elmo; Mrs. F. M. McCartin, Stillwater; and Mrs. Russell Carlson, Stillwater.

Winona

Mrs. William Heise of Winona, new president of the Woman's Auxiliary, will be assisted in her duties by Mrs. J. Hamlin of St. Charles, Mrs. Lewis I. Younger and Mrs. A. E. Meinert of Winona.



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In Memoriam

NORMAN E. ANDERSON

Dr. Norman E. Anderson of Harmony, Minnesota, passed away June 12, 1946. He and his son had returned from a week-end visit in Minneapolis and death came suddenly. He had been living with his son since his wife's death, February 2, 1946.

Dr. Anderson was born in La Crosse, Wisconsin, March 5, 1881. He was a graduate of the College of Physicians and Surgeons, University of Illinois, in 1903. He interned at St. Francis Hospital in La Crosse. After his marriage to Clara Hanson Kjose on November 30, 1904, he practiced a short time in Mondovi, Wisconsin. In December, 1906, they moved to Harmony.

Dr. Anderson served the people of the community faithfully and was always ready to respond to calls, irrespective of time or weather. He was a member of the Commercial Club for many years and served on the School Board a number of years. He was a member of the Olmsted-Houston-Fillmore-Dodge County Medical Society, the Minnesota State and American Medical Associations.

He is survived by a son, Dr. U. S. Anderson of Minneapolis; two daughters, Mr. Arthur Kerkhof and Mrs. Wendell Boice, both of Minneapolis; his mother, Mrs. N. A. Anderson of Sioux Falls, South Dakota; three sisters, and two brothers.

GEORGE L. JOHNSON

Dr. George L. Johnson of Newfolden, Minnesota, died at the University Hospital, Minneapolis, on April 19, 1946, at the age of sixty-nine.

Dr. Johnson was born December 10, 1876, near Cannon Falls, Minnesota. He attended Carleton College and graduated from Marquette Medical School in Milwaukee in 1910. He began practice at Newfolden the following year and had practiced there continuously since that time with the exception of a period during World War I when he served in the Medical Corps as Lieutenant Colonel.

He served one term as a representative from Marshall County in the State Legislature and had filed as a candidate for the Legislature this year.

Dr. Johnson was a member of the Red River Valley Medical Society, the Minnesota State and American Medical Associations.

He is survived by three brothers, Frank and Reuben of Cannon Falls and North of Bay City, Wisconsin.

ROY K. KENDALL

Dr. Roy K. Kendall, son of Dr. and Mrs. E. C. Kendall of Rochester, Minnesota, died March 13, 1946, in Miami, Florida, at the untimely age of twenty-seven.

Roy Kendall was born in Rochester, December 7, 1918. He attended Rochester High School and graduated from Carleton College in 1940. He received his M.D. degree from Harvard Medical School in December, 1943.

Dr. Kendall then accepted an internship in Children's Hospital, Boston, but because of poor health was obliged to terminate this appointment after three months. For an interval of five months during 1944 and 1945 he assisted Dr. Lambertus Wormolts in Oregon, Illinois, and then completed the year's work as an interne at Jackson Memorial Hospital, Miami.

He received his license to practice medicine from the Florida state board of licensure in January this year and from then until his untimely death was associated with Dr. S. E. Chambers in Miami. Although the opportunity to work in the field of clinical medicine was brief, Dr. Kendall clearly demonstrated unusual ability in regard to both the art and science of medical practice, his associates said.

In January, 1944, Dr. Kendall married the former Jeanne Nettz of Dixon, Illinois. He is survived by his wife and son, Stewart, his parents, a brother, Hugh Kendall of Rochester, N. Y., a brother, First Lieutenant Norman H. Kendall, and a sister, Elizabeth, a student at Carleton College.

THOMAS F. QUIMBY

Dr. Thomas F. Quimby of Minneapolis, oldest member of the Hennepin County Medical Society, died June 30, 1946, at the age of ninety-one.

Dr. Quimby was born in Biddeford, Maine, May 10, 1855. He attended Exeter Academy and Union College, Schnectady, New York, before receiving his M.D. degree from the College of Physicians and Surgeons in New York City in May, 1878. For two years following graduation, he attended the University of Heidelberg, Germany, and in 1880 began the practice of medicine in Minneapolis.

Dr. Quimby was Health Officer for three years and a member of the Board of Education for twelve years. He was also local surgeon for the Soo Railway for a time.

C. B. WRIGHT

Lt. Commander C. B. Wright, son of Dr. Charles D. Wright, of Minneapolis, died of poliomyelitis at Key West, Florida, on June 25, 1946. At the time of Commander Wright's death, Mrs. Wright was also seriously ill with poliomyelitis.

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Of General Interest

Dr. John Melby Grogan, formerly of Wadena, has opened offices for general practice in Ceylon.

* * *

Dr. Wayne W. Canfield has returned to Houston and resumed his practice there.

* * *

Dr. Harry W. Morcom, who has been practicing at Badger for the past two years, has closed his offices and is moving away.

* * *

Dr. Hill, who was a platoon commander, enlisted on July 6, 1942, and returned to his duties at the Clinic in January, 1946.

* * *

Announcement has been made of the appointment of Dr. A. Carlyle Tingdale, Hibbing health officer, to the Hibbing Infantile Paralysis Board.

* * *

Dr. Charles Mayo participated in the round-table conference of the Department Rehabilitation Committee of the American Legion held in Saint Paul in June.

* * *

Dr. Donald C. Anderson is now located in Lamberton where he has taken over the practice of Dr. Edward M. Anderson, who has accepted a fellowship at the University of Minnesota.

* * *

The Bronze Star Medal has been presented to Dr. John R. Hill, Mayo Clinic, "for meritorious service in direct support of combat operations from October 21, 1944, to May 8, 1945, in Belgium and Germany."

* * *

Major Peter J. Schultz, who was home on terminal leave in May, will resume his practice in Richfield sometime during the summer. Major Schultz' military assignments included service in France and Germany.

* * *

Dr. George Freeman, superintendent of the State Hospital at St. Peter, was a guest speaker at the annual dinner meeting of the Blue Earth County Public Health Association. Dr. Freeman's subject was "Care of the Senile."

* * *

Dr. Gordon B. New, Mayo Clinic, presented a paper illustrated by motion pictures on "Further Use of the Sickle Flap," at the meeting of the American Association of Plastic Surgeons held recently in Toronto, Canada.

* * *

At the meeting in Atlantic City recently, Dr. Cecil J. Watson, Professor of Medicine, was elected President of the Society for Clinical Investigation and also Recorder and member of the Council of the American Association of Physicians.

After six years of residence in Alden, Dr. John P. Person has moved to Albert Lea, where he has purchased a home on Fountain Street near the Naeve Hospital. Hereafter, Dr. Person will be in his offices in Alden part time.

* * *

Dr. Adlai A. Brink has returned to his practice at Baudette after an absence of some months. While away Dr. Brink took a special course of study at Cook County Hospital in Chicago and also spent some time in observation at the hospitals in Rochester.

* * *

Dr. Simon D. Wolstan has resumed his medical practice in Minneota after an absence of thirty-two months in the armed forces. A captain in the Army Medical Corps, Dr. Wolstan's assignments included a year in the Pacific Theatre.

* * *

Major A. B. C. Knudson, formerly of Minneapolis, has been discharged from active military service and has been appointed Assistant Chief of Physical Medicine Division in the Department of Medicine and Surgery of the Veterans Administration, Central Office, Washington, D. C.

* * *

Dr. John S. Lundy and Dr. Charles L. Adams, Mayo Clinic, attended the meeting of the American Society of Anesthesiologists held in New York City. Dr. Lundy, who is president of the Society, also stopped off in Detroit during the same week, where he addressed the staff of the Grace Memorial Hospital on "The Use of Curare in Anesthesia."

* * *

The three regional meetings of the Morrison County Medical Care Plan held at Little Falls, Randall and Pierz, were addressed, respectively, by Drs. Albert A. Amundsen, W. S. Knight, and Raymond T. Healey.

The plan, which has been in operation in the county for the past four years, has attracted nationwide attention.

* * *

Roy T. Pearson, recently released from military service, has joined his brother, Dr. Bror F. Pearson in the practice of medicine at Shakopee. A 1944 graduate from the University of Minnesota, Dr. Pearson served his internship in a naval hospital, then, with the rank of lieutenant, he was assigned to duty in the South Pacific.

* * *

Dr. Bernard Street, who was in charge of the practice of Dr. Joseph Mose, in association with Dr. Warren E. Wilson in Northfield while Dr. Moses was on an extended vacation, has opened offices at St. Cloud.

(Continued on Page 724)

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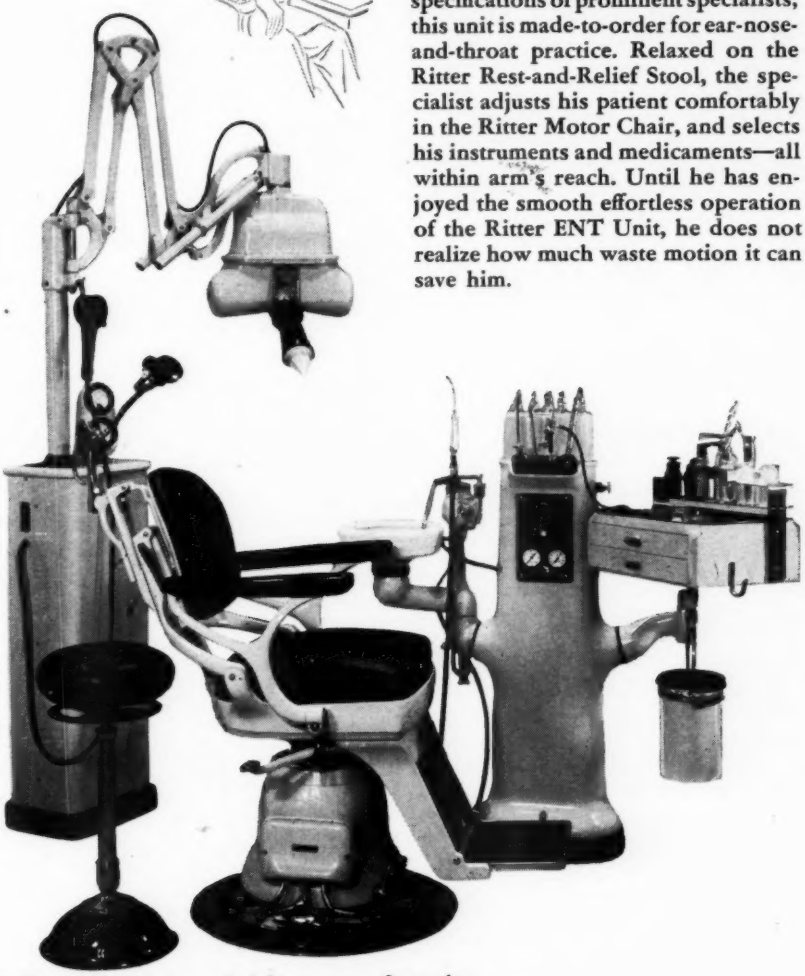

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(Continued from Page 722)

In addition to carrying on his private practice, Dr. Street will also serve as chief surgeon at the State Reformatory. Prior to four years of military service, Dr. Street was in practice in St. Cloud.

* * *

In honor of the completion of Dr. William Friesleben's thirty-ninth year of practice at Sauk Rapids, a public celebration of "Dr. Frieselben Day" was held at the Municipal Park on June 30.

Dr. Friesleben, a native of Livingston County, Illinois, came to Sauk Rapids immediately following his graduation from the University of Cincinnati, Ohio.

* * *

Dr. James E. Murphy, who was in practice at Whitefish, Montana, before his entry into the Army Medical Corps five years ago, has joined Dr. Leslie M. Evans in practice at Sauk Rapids. Dr. Murphy was born in Minneapolis and graduated from the University of Minnesota Medical School. For the greater part of his military service he was stationed in the South Pacific, but recently he was a member of the staff of the Veterans Hospital in Montana.

* * *

The appointment of Dr. Alcibiade A. Giroux as health officer of North Mankato to succeed Dr. Helmer J. Nilson, has been announced by the city council.

Despite reports to the contrary, Dr. Nilson does not intend moving away from North Mankato. In discussing his resignation as health officer, Dr. Nilson said that he was motivated by the conviction that after ten years on the job, it was time some other doctor took over.

* * *

Remodeling of the building which Dr. William R. Blomberg purchased in Princeton some months ago has been completed and Dr. Blomberg is now located in his new offices. The suite includes waiting room, business office, two examining rooms for adults, a children's examining room, an x-ray room, a physiotherapy room, a refraction room for eye examinations, a developing room and a laboratory. The lighting is fluorescent, the walls are sound-proof, and a large exhaust fan changes the air in the suite every two minutes.

* * *

Dr. Theodore Hansen, formerly of Omaha, Nebraska, has entered practice at Alden, where he is associated with Drs. Donald Branham, Sidney Whitson and John P. Person. Dr. Hansen was recently discharged from the armed forces after three years in service. A captain in the Army Medical Corps, he was assigned to the South Pacific Theatre for twenty-two months. He is a graduate of the University of Nebraska School of Medicine.

* * *

The Van Meter Prizes, given by the American Association for the Study of Goiter for the best essay on original work in problems related to the thyroid gland, has been awarded to Dr. Brown M. Dobyns,

M.D., M.S. in Surgery, assistant to the surgical staff, Division of Surgery, Mayo Clinic. The paper submitted by Dr. Dobyns was part of his thesis on studies of exophthalmus produced by thyrotropic hormone.

Dr. Dobyns read his essay at the meeting of the Association held in Chicago in June.

* * *

Dr. James R. Eckman, Mayo Clinic, has been presented with the Army Commendation Ribbon. The accompanying citation, signed by Major General N. T. Kirk, the Surgeon General, reads in part: "Your service with the Medical Department has been exceptional when compared with others of the same grade of position, and I wish to commend you for your outstanding contribution as Assistant to the Director of the Medical Intelligence Division, Preventive Medicine Service, Office of the Surgeon General.

* * *

Dr. Gerald H. Teasley, a fellow in urology at the Mayo Foundation, has been awarded the Legion of Merit "for outstanding service . . . characterized by proficiency surpassing that which might be reasonably expected of an officer in his position." Dr. Teasley, who was formerly director of the Military Personnel Division, Office of the Army Surgeon General, Washington, D. C., established the classification system which was followed in the distribution of officers. When released from service, Dr. Teasley was a lieutenant colonel.

* * *

The possible advantages attainable from a well-organized health department were discussed by Dr. Robert N. Barr, of the State Health Department, Saint Paul, at a meeting open to the general public held at the Senior High School in Winona. Various ways of establishing a central health department which would direct the activities of all organizations directly concerned with the health of the community were explained by Dr. Barr, who is pubic health consultant of local health units in the Middle West.

* * *

Dr. Jacob S. Blumenthal, Columbia Heights physician and surgeon, who has been located at 40th and Central Avenues for the past twenty years, has moved to 40th and Washington Avenues, where he has air-conditioned offices which include consultation room, examining rooms, x-ray rooms and developing room.

A fellow in the American College of Physicians, Dr. Blumenthal is a clinical professor of medicine at the University of Minnesota where he teaches internal medicine.

* * *

Since returning from twenty-five months of overseas duty in the Army Medical Corps, Dr. Solomon E. Horwitz, 902 Medical Arts Building, Minneapolis, has changed his surname to Howard. While in military service Dr. Howard's assignments included Consultant in Syphilis at the 23rd General Hospital (Buffalo University Unit) in Naples; Chief of Section of Dermatology and Allergy at the 3rd General Hospital (Mount Sinai New York Unit) in North Africa, and lecturer on skin and allergy diseases to medical officers in France prior to their redeployment to the Pacific Theatre.

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The Legion of Merit has been presented to Dr. Thomas B. Magath, of the Mayo Clinic, "for exceptionally meritorious conduct . . . as investigator for and advisor to the Surgeon General of the Navy on matters of sanitation and tropical medicine; as Navy representative on the Interdepartmental Quarantine Commission, and as Navy Quarantine Officer . . . he visited many of the principal cities of the world . . . helping to lay a foundation for future quarantine practices with special reference to air traffic." Dr. Magath was a captain in the Navy when he performed the services for which the decoration was awarded, but he was later promoted to the rank of commodore.

* * *

The Hennepin County Medical Society has announced the return from military service of the following members:

Dr. Clyde Cabot has resumed his practice in his offices in the Medical Arts Building. A member of the Army Medical Corps, Dr. Cabot served at Tripler General Hospital, Oahu, Hawaii.

Dr. Edward Colp has reopened his offices at 3805 Broadway, Robbinsdale. Dr. Colp served at naval air stations in the South Pacific.

Dr. Frank Smisek, whose offices are at 1501 Washington Avenue South, Minneapolis, was on duty in the South Pacific Theatre for fifteen months.

* * *

Dr. Gordon Anderson, physician and surgeon, who has been head of a clinic at Great Falls and Deer Lodge,

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Montana, has entered private practice in Hibbing, where he was born and grew up. Dr. Anderson graduated from the University of Minnesota Medical School in 1934 and took pastgraduate work in New York City. His offices which consist of reception room, nurses room, x-ray room, laboratory and private offices, are located at 1920 Fourth Avenue East.

While practicing in Montana, Dr. Anderson was chief surgeon for the Montana State Prison at Deer Lodge and for the Milwaukee and Northern Pacific railroads.

* * *

Dr. Paul P. Pierce, who was resident physician at the Children's Memorial Hospital in Chicago when he entered military service three and a half years ago, has been appointed assistant director of the Rochester Child Health Project and consultant in the Pediatrics Section of the Mayo Clinic.

A native of Columbia, Missouri, Dr. Pierce received his B.A. from the University of Missouri and his medical degree from Harvard in 1939. He served his internship at the Kansas City General Hospital. While in the Army Dr. Pierce was stationed at the Lawson General Hospital in Atlanta, Georgia, for two years, and afterward at the 181st General Hospital in India for eighteen months.

* * *

Dr. Albert D. Mattson, who has been engaged in graduate study at the University of Minnesota Medical School since his discharge from military service last September, is now associated with the Madison Clinic in Madison. Dr. Mattson, a graduate from Central High School and Macalester College, Saint Paul, took his medical degree at the University of Minnesota in 1939. Following the completion of his internship at St. Mary's Hospital in Duluth, he was in general practice at Milaca for a year. From there he went to Atwater and five months later was inducted into the Army, where, with the rank of captain, he was attached to the Air Force and served in China for twenty-six months.

* * *

Dr. Russell H. Frost, formerly a member of the Saint Paul Clinic, has been made director of tuberculosis treatment at all Veterans Administration Hospitals in VA Branch 8. The area includes Minnesota, the Dakotas, Iowa and Nebraska.

Dr. Frost, a native of Willmar, graduated from the University of Minnesota Medical School in 1925. At the time of his entry into military service in 1942 he was medical director and superintendent of the Buena Vista Sanatorium at Wabasha. A commander in the Navy Medical Corps, his assignments included Chief of Medicine at the Marine Barracks, New River, N. C., the Navy Medical Center at Bethesda, Maryland, and later Pearl Harbor and Majuro Atoll in the Marshall Islands, where he was transfusion consultant.

* * *

Dr. O. L. Norman Nelson has been discharged from the Navy and is now associated with Dr. A. C. Kerkhof in the practice of internal medicine with offices at 601 Medical Arts Building, Minneapolis. Dr. Nelson was

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first assigned to the U. S. Naval Hospital, Seattle, Washington, October 19, 1942. Subsequently he was associated with the Naval Air Stations at Seattle and Whidbey Island, Washington. In October 1943 he was assigned to the Medical Field Service School at Camp Elliott, San Diego, and then to the Marine Corps Base. In March 1944 he went overseas with the Marine Aviation Units of the Fleet Marine Forces, spending most of his time on Bougainville, Esperitu Santo and Peleliu. In June 1945 he returned from overseas and was stationed at the U. S. Naval Hospital, Medford, Oregon. He was separated from the service January 4, 1946, with the rank of Lieutenant Commander.

* * *

A special meeting in honor of members returned from military service was held by the Southwestern Minnesota Medical Association at the Lutheran Church in Slayton on May 13. According to the report of the secretary, Dr. Bryon O. Mork, Jr., only eight of the thirteen members who were inducted into the armed forces have returned to their former practices; the other five are believed to have located elsewhere. The guests of honor were Drs. Albert I. Balmer and Stanley Chunn, Pipestone; Dr. Victor Doman, Lakefield; Dr. Walter Bret Wells, Jackson; Dr. Ludolf J. Hoyer, Windom; Dr. Peter J. Pancratz, Mountain Lake; Dr. Gerrit Beckering, Edgerton; and Dr. Walter B. Schmidt, Worthington.

The members who have not returned to their former locations are Dr. Graham G. Smith, Fulda; Drs. Stuart Taylor and Ira B. Wilson, Worthington; Dr. Robert Hebbell, Windom, and Dr. Lawrence E. Sjostrem, Storden.

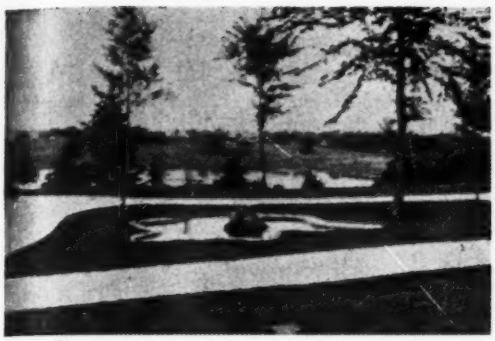
* * *

Dr. John S. Burleigh, Rancho Santa Fe, California, has been admitted to practice in Minnesota by the State Board of Medical Examiners and has opened offices in Luverne. Although born in Luverne in 1913, Dr. Burleigh has lived in California since he was twelve years old, when his mother moved there following the death of his father, a Luverne banker. He took both his B.A. and medical degrees at the University of Southern California and served his internship at the Presbyterian Hospital in Los Angeles. He entered the Navy in 1941 and served aboard the aircraft carrier, USS *San Jacinto* in the campaigns of Iwo Jima, Okinawa, the Philippine Sea, the China Sea, and others in that area. He returned to this country just prior to the end of the war and at the time of his discharge was a full commander.

In returning to Minnesota, Dr. Burleigh is fulfilling a long-cherished desire, and he says that now that he is back he likes it better than he thought he would. He is married and has three sons—Michael, aged two, and Philip and Christopher, twins, a year old.

* * *

The Seelert Orthopedic Appliance Company of Minneapolis celebrated its silver jubilee this month by moving into new and larger modern quarters at 18 North Eighth Street. New office hours have also been announced, the hours being from 8 a.m. to 5 p.m. week days, except Saturdays, when the hours are from 8 a.m. to 1 p.m. The company will continue to manufacture artificial limbs and orthopedic appliances as in the past.



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Hospital News

St. Luke's Hospital at Fergus Falls has announced the appointment of Sylvester H. Braaten as business manager. Mr. Braaten recently returned to Fergus Falls after four years in military service. He was overseas for eighteen months and as a master sergeant was in charge of the supplies and equipment for a 1,785-bed hospital.

* * *

The community of Jackson is raising funds by public solicitation for the purchase of the hospital operated there by Dr. Walter H. Halloran, who desires to dispose of it. The price asked for the hospital, equipment and the Halloran home is $80,000, and $50,000 must be raised in order to finance the project. While any contribution is welcomed, a donation of $25 makes the donor a stockholder in the hospital and carries one vote. No stockholder will be entitled to more than four votes in order to avoid the possibility of any one individual or faction monopolizing control of the hospital. This does not mean, however, contributions are not to be as large as means and liberality dictate. The hospital is to function as a non-profit organization and will qualify for approval by the Blue Cross.

* * *

In tuberculosis the first and greatest need is education; education of the people and through them education of the state.—Edward Livingston Trudeau.

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A hospital for the care and treatment of Nervous and Mental disorders. Quiet, cheerful environment. Specially trained personnel. Recreational and occupational therapy.

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Occupational Therapy. Speech Corrective Work.

The School is only 26 miles west of Chicago. All west highways out of Chicago pass through or near Wheaton.

Referring physicians may continue to supervise care and treatment of children placed in the School. You are invited to visit the School or send for catalogue.

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A quiet, ethical hospital with therapeutic facilities for the diagnosis, care and treatment of Nervous and Medical cases. Invites coöperation of all reputable physicians who may supervise the treatment of their patients.

PSYCHIATRISTS IN CHARGE
Dr. Hewitt B. Hannah
Dr. Joel C. Hultkrans

2527 2nd Ave. S., Minneapolis. Phone At. 7369

REPORTS and ANNOUNCEMENTS

MEDICAL BROADCAST FOR JULY

The following radio schedule of talks on medical and dental subjects by William O'Brien, M.D., Director of Postgraduate Medical Education, University of Minnesota, is sponsored by the Minnesota State Medical Association, the Minnesota State Dental Association, the Minnesota Hospital Association and the University of Minnesota School of the Air.

July		
4— 1:15	WCCO	Safe Vacation
6—11:30—	KUOM-KROC KFAM	Medicine in the News
11— 1:15	WCCO	Care of Skin in Summer
13—11:30—	KUOM-KROC KFAM	Medicine in the News
18— 1:15—	WCCO	Hot Weather Health Hints
20—11:30	KUOM-KROC KFAM	Medicine in the News
23— 1:15	WCCO	Your Community Hospital
25— 1:15	WCCO	Getting Children Ready for School
27—11:30	KUOM-KROC KFAM	Medicine in the News

CIVIL SERVICE MEDICAL OFFICER TO BE APPOINTED SOON

Appointment will be made soon of a Regional Medical Officer in the Eighth Regional Office of the U. S. Civil Service Commission, Saint Paul. The salary is $7,102.20 per annum. Duties require a medical training. Detailed information as to duties and forms to be filled out and filed before July 24, 1946, may be obtained from the Eighth U. S. Civil Service Regional Office, Post Office and Customs Building, Saint Paul 1, Minnesota.

MISSISSIPPI VALLEY MEDICAL SOCIETY

The eleventh annual meeting of the Mississippi Valley Medical Society will be held at the Hotel Jefferson, St. Louis, Missouri, September 25-26-27, 1946.

More than thirty clinical teachers from the leading medical schools will conduct this postgraduate assembly whose entire program is planned to appeal to general practitioners. There will be more than sixty technical and scientific exhibits, noon-day round table luncheons, and a banquet, preceded by a social hour. Dr. Arthur H. Compton, Nobel Prize Laureate and Chancellor of Washington University, will be the principal banquet speaker, together with the presidents of the Illinois, Iowa and Missouri State Medical Societies.

(Continued on Page 733)

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ANNOUNCES CONTINUOUS COURSES

SURGERY—Two-week Intensive Course in Surgical Technique, starting July 29, August 26, and every four weeks thereafter. Four-week Course in General Surgery, starting July 15, August 12, September 9.
One-week Course in Surgery of Colon and Rectum, starting September 16.
One-week Course in Thoracic Surgery, starting September 23.

GYNECOLOGY—Two-week Intensive Course, starting October 21.
One-week Personal Course in Vaginal Approach to Pelvic Surgery, starting September 16.

OBSTETRICS—Two-week Intensive Course, starting October 7.

MEDICINE—Two-week Intensive Course, starting September 23.

ELECTROCARDIOGRAPHY AND HEART DISEASE—Two-week Intensive Course, starting August 5.

GASTROSCOPY AND GASTROENTEROLOGY—Two-week Personal Course, starting October 7.

DERMATOLOGY AND SYPHILOLOGY—Two-week Course, starting September 23.

General, Intensive and Special Courses in All Branches of Medicine, Surgery and the Specialties.

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BOOK REVIEWS

Books listed here become the property of the Ramsey, Hennepin and St. Louis County Medical Libraries when reviewed. Members, however, are urged to write reviews of any or every recent book which may be of interest to physicians.

THROUGH THE STRATOSPHERE. The Human Factor in Aviation. Maxine Davis. 253 pages. Price, $2.75, cloth. New York: The Macmillan Co., 1946.

DISEASES OF THE RETINA. Herman Elwyn, M.D. Senior Assistant Surgeon, New York Eye and Ear Infirmary. 593 pages. Illus. Price, $10.00, cloth. Philadelphia: The Blakiston Co., 1946.

DIABETES. Henry J. John, M.A., M.D., F.A.C.P. Lt. Col., MC, Cleveland, Ohio. 300 pages Illus. Price, $3.25, cloth. St. Louis: C. V. Mosby Co., 1946.

HUMAN EMBRYOLOGY. Bradley M. Patten, Ph.D. Professor of Anatomy in the University of Michigan Medical School. 776 pages. Illus. Price, $7.00, cloth. Philadelphia: The Blakiston Co., 1946.

CORKY, THE KILLER. A Story of Syphilis. Harry A. Wilmer, M.D. 67 pages. Illus. Price, $1.00. New York: American Social Hygiene Assn., 1945.

The invasion of the human body by the spirochetes which cause syphilis is tersely reported in the vocabulary of modern warfare by Dr. Harry A. Wilmer, M.D. and Ph.D. in Pathology from the University of Minnesota, who graphically illustrates this invasion by "Corky, the Spirochete," as he did in his previous account of tuberculosis entitled, "Huber, the Tuber."

The author's imaginative talent has the endorsement of several outstanding figures in Medicine including Kendall Emerson, J. E. Moore, Paul A. O'Leary, and Thomas Parran. The American Social Hygiene Association is the publisher, and the dedication is to Dr. Richard E. Scammon, Professor at the University of Minnesota School of Medicine.

This readable account of the attack of syphilis upon the human body is recommended both to lay readers and, because of its scientific accuracy, to medical students and physicians.

M. J. O. GULLINGSRUD, M.D.

RENAL DISEASE. E. T. Bell, M.D., Professor of Pathology, University of Minnesota. With 115 illustrations and four color plates. Price $7.50. Philadelphia: Lea and Febiger, 1946.

This is the best book on renal diseases written to date. This volume should have a wide reception not only because Dr. Bell is a recognized authority on diseases of the kidney, but also because he is regarded by his students as an outstanding teacher at the University of Minnesota Medical School. Students of Dr. Bell remember him for his lectures and his pathological conferences Tuesday noon where the clinical and pathologic features of cases are discussed and correlated. Most clinicians are a little subdued in the presence of a pathologist, but any clinician knows he has to very sure of his ground in discussing a clinical matter with Dr. Bell. His knowl-

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edge of clinical medicine as well as pathology is astounding, as this book testifies.

The chapter on the histology of the kidney is excellent, and it should be noted that most of the fundamental studies concerning the structure of the glomerulus originated in Dr. Bell's department. The review of the normal and pathologic physiology of the kidney is concise and comprehensive. It is in the discussion of glomerulonephritis and the hypertensive kidney that the author is at his best. The chapters on lipoid nephrosis and the eclamptic kidney should be singled out for their excellence. Mention is made of the kidney in crush syndrome, hepato-renal syndrome, burns, et cetera.

The illustrations are clear and the photomicrographs are technically superior. A workable bibliography is appended. This book is recommended without reservation to anyone who wishes to have the most up-to-date knowledge of kidney disease.

THE MARIHUANA PROBLEM IN THE CITY OF NEW YORK, Sociological, Medical, Psychological and Pharmacological Studies. By the Mayor's Committee on Marihuana. Lancaster, Pa.: The Jaques Cattell Press, 1946.

In 1939 Mayor LaGuardia, upon the recommendation of the New York Academy of Medicine, appointed a committee whose findings and conclusions are collected in this extensive and thorough study of the marihuana problem. The traffic in and smoking of the drug, which created the interest in the study at the outset, seemed less a problem in New York City, indeed confined mostly to the region of Harlem, than in New Orleans and other southern cities.

The psychological studies relating to drug effects indicate that popular understanding is in error, that is, the drug is of little value to musicians, and as a causative factor in crime marihuana is perhaps overrated. The report of the pharmacological aspects is exhaustive and adds and collects many new concepts in the literature pertaining to active principles, the chemistry, and the specific effects of marihuana and its derivatives.

This volume is recommended to educators, public safety officials and sociologists, as well as to members of the medical profession.

—M. J. O. GULLINGSRUD, M.D.

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Reports and Announcements

MISSISSIPPI VALLEY MEDICAL SOCIETY

(Continued from Page 731)

All ethical physicians are cordially invited to attend. A detailed program may be obtained from the Secretary, Harold Swanberg, M.D., 209-224 W.C.U. Bldg., Quincy, Illinois.

WASHINGTON COUNTY MEDICAL SOCIETY

The Washington County Medical Society met May 14 in regular monthly session. There was no scientific program as the action on "A and B" Plans had been postponed till this time for further study and consideration. Dr. Wade R. Humphrey, a member of the Committee on Organization for Prepaid Medical Service, in the meantime, volunteered to obtain all available information on the subject. This he did and explained at length.

After due consideration and according to the By-Laws, the following Amendment was unanimously adopted: Be it enacted that "a fifty per cent (50) attendance by members at our regular meetings is necessary to maintain membership by members practicing in Washington County."

Classified Advertising

FOR SALE—Precision medical x-ray, fluoroscope, cassettes. In excellent condition. Diathermy machine. $500.00 for all. Address D-154, care MINNESOTA MEDICINE.

FOR SALE—Active general practice in town of 550, north-central Minnesota, with house-office combination completely modern, grossing $15,000.00 yearly. Excellent hospital facilities 7 miles. Prefer sale house-office, cash or terms. Purchase of drugs and equipment optional. Address D-172, care MINNESOTA MEDICINE.

WANTED—Physician, preferably with some special training, to assist in general practice in city of 2,000, by physician with excellent equipment and offices. Give full personal and professional qualifications. Address D-171, care MINNESOTA MEDICINE.

PERSONALIZED DUPLICATE-SIX RECEIPTS—Your Name, Profession, Phone and Address printed on each receipt at no additional cost over ordinary receipts. 504 receipts in duplicate to a book—book lies flat when opened. Price—One book, $2.25. Samples and quantity prices by request. Spillane's, 2121 Chicago Avenue, Minneapolis 4, Minnesota.

WANTED—Young doctor interested in Eye, Ear, Nose and Throat to become associated with other doctors in same line. Address D-188, care MINNESOTA MEDICINE.

FOR SALE—Physician's and surgeon's office equipment and instruments, like new, at very low price. May be seen in Saint Paul. Doctor specializing. Telephone NEstor 0337, or address D-187, care MINNESOTA MEDICINE.

EXCELLENT OPENING—In a small town on the St. Croix River. Accessible to a good hospital in the community. Large unopposed territory, excellent collecting. Reason for discontinuance of practice is due to health condition. Equipment can be purchased at invoice price or you may locate here without purchasing equipment. No bonus asked. A very pleasant place to live. Address D-189, care MINNESOTA MEDICINE.

WANTED—Female technician who can do laboratory and x-ray work, in medical firm situated in lake region in Minnesota. Good salary from the start. Address D-190, care MINNESOTA MEDICINE.

WANTED AT ONCE—Assistant in general practice and surgery. Address Dr. Charles C. Cooper, 322 Hamm Building, Saint Paul 2, Minnesota. Telephone: GArfield 1316.

WANTED—Partner in a busy general practice in Minnesota. Must be able to do emergency surgery. Address D-182, care MINNESOTA MEDICINE.

YOUNG WOMAN PHYSICIAN wants to do general practice in Minnesota town as assistant, associate, or will buy. Address D-183, care MINNESOTA MEDICINE.

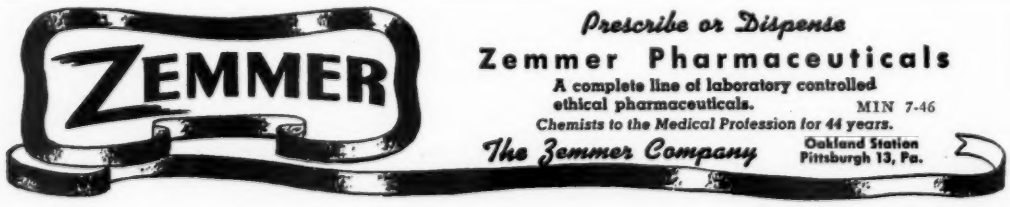
FOR SALE—Office equipment, x-ray, diathermy, examining table, ultra violet lamp and instruments. Reason for sale—quitting private practice. Price very reasonable. Address D-184, care MINNESOTA MEDICINE.

WANTED—Physician and surgeon to take over large practice in prosperous territory immediately. Present physician retiring after 31 years of practice. If interested, telephone collect: Number 4821. Civic and Commerce Association, Wilmont, Minnesota.

WANTED—Young physician to do general practice with a small group in southern Minnesota. Address D-186, care MINNESOTA MEDICINE.

WANTED—Superintendent-anesthetist for 21-bed hospital, 50 miles north of Twin Cities. Plans being completed for 24-bed addition. Relief anesthetist in vicinity. Have a new McKesson Nargraph. Salary open. Also need four or five registered nurses to replace several who have left recently because of illness or home responsibilities. Salary, $130.00 and complete maintenance to start. Nurses' residence near hospital. Address D-185, care MINNESOTA MEDICINE.

WANTED—Well-qualified young physician interested in internal medicine and general practice for association with well-established general surgeon in suburbs. Address D-176, care MINNESOTA MEDICINE.

FOR SALE—Completely equipped medical office. Building may be purchased or rented. Located in western Minnesota town near lake region. Trade territory—4,500 people. Nearest physician, 20 miles. Address D-180, care MINNESOTA MEDICINE.

FOR SALE—One Burdick mercury quartz lamp, wall type, air cooled, in good condition; also considerable number of used aluminum splints. One used Roger-Anderson traction apparatus. Address D-181, care MINNESOTA MEDICINE.